



अप्रमत्तेन वेदव्यम्

COTTON UNIVERSITY

TENDER DOCUMENT

FOR

**DESIGN, MANUFACTURE, SUPPLY, DELIVERY,
INSTALLATION, TESTING & COMMISSIONING OF 1X
500 KVA, 415 V SILENT D.G. SET FOR COTTON
UNIVERSITY**

PART - I

TECHNO-COMMERCIAL BID

NIT No.02 of 2020-21

Dt. 01- 09 -2020

Sd/-
1/9/20

COTTON UNIVERSITY
PANBAZAR,
GUWAHATI – 781 001

NOTICE INVITING TENDER No: 02 of 2020-21

Sealed tenders in two-bid-system are invited for and on behalf of the Cotton University for “Design, Manufacturer, Supply, Delivery, Installation, Testing & Commissioning of 1 x 500 KVA, 415 V, Silent D.G. Set for the Cotton University”

Key details of the tender are furnished below-

Notice inviting tender No.	
Name of the work	“Design, Manufacturer, Supply, Delivery, Installation, Testing & Commissioning of 1 x 500 KVA, 415 V, Silent D.G. Set for the Cotton University”
Cost of tender document	Rs 1000.00
Last date and time of receipt of tenders	22.09.2020, upto 2.00pm
Date and time of opening of technical bid	22.09.2020, at 3.00pm
Date and time of opening of price bid	Will be intimated to the technically qualified bidders through email.
EMD	Rs 82,000.00
Completion period	3 months

Terms and Conditions:

1. Tenders will be opened in presence of authorized bidder’s representatives who choose to attend the opening of tender on the above specified date, time
2. In case the day of submission of the tenders happens to be holiday on account of Govt. notification, the submission & opening of the tenders shall automatically be extended to the next working day, the times specified remaining the same.
3. Any future clarification(s) and / or corrigendum (s) shall be communicated through the website. Therefore, the bidders are requested to regularly visit the website.
4. The University reserves the right to amend or withdraw any of the terms and conditions contained in the Tender Document including quantity of items to be supplied or to reject any or all tenders without giving any notice or assigning any reason. The decision of the University shall be final in this regard.

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5. **Validity period:** The rates quoted in the tender shall remain valid for 120 days.
6. Complete Tender Document may be downloaded from the university's website www.cottonuniversity.ac.in. Interested contractors who have credentials to fulfil the Eligibility/ Qualifying criteria as detailed in item-9 below. Tenderers are requested to submit tenders as per the formats and guidelines given in this document.
7. **Submission of EMD and cost of tender document:** The EMD and the cost of tender documents shall be submitted in the form of Demand draft/ Banker's cheque in favour of "Registrar, Cotton University" payable at Guwahati. The EMD and the cost of tender document shall be submitted in the envelope containing the Technical Bid. **Tender submitted without EMD and cost of tender document shall be summarily rejected and such tenders will not be considered for technical evaluation.**
8. Bidders are expected to examine all instructions, forms, terms & conditions, and specifications in the bidding document. Failure to furnish all information prescribed in the bidding documents or submission of bids not substantially responsive to the bidding documents in every respect may result in the rejection of the bid.
9. **Eligibility/ Qualifying criteria:**
 - i) The bidder must be an OEM or authorized dealer of the brand of the DG set offered. In case, the bidder is an authorized dealer, he (or the firm) must have been under such dealership agreement with the OEM for not less than 3 years. Relevant certificate in support shall be submitted. Authorization certificate from the OEM for participation for this particular tender only, shall not be accepted.
 - ii) The diesel engine and alternator of the offered DG set must be from the approved makes listed in Clause 3.6 of Section-3- Scope & Technical Specification..
 - iii) The bidder must have experience in execution of at least 4 (four) works of supply, installation, testing & commissioning of D.G. Sets of the brand offered in this tender, having capacity not less than 500 KVA during last 7 (seven) years at any Govt. / Semi Govt. Departments or Autonomous Body supported by both work order and completion certificate from clients. Out of the aforementioned service experiences, at least two works must have been executed in Assam.
 - iv) The brand of the engine offered, must have authorized service centre in Guwahati. Documentary evidence of such service centre located at Guwahati, must be submitted along with the Techno-Commercial Bid.
 - v) The offered model & capacity of the DG set must possess valid compliance certificates under CPCB norms for noise and emission. Copies of such compliance certificates shall be enclosed.
 - vi) Annual turnover in last 3 (three) years should be at least Rs. 35 lakhs.
 - vii) The bidder should submit technical specification bid format, statement against each point of the technical specifications (Section-5, Bidding Schedule Technical Bid) along with this offer. Overall single compliance statement is not acceptable. In the absence of point-wise compliance statement, the offer is liable for rejection.

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10. Submission of Bid:

Tender shall be submitted in the following manner in separate sealed covers duly superscripted as explained in the special conditions of contract :

Part I – Techno-Commercial Bid

Part II – Price Bid

The EMD and the cost of tender document shall be deposited along with Part – I, i.e. Techno-Commercial Bid.

Tenders shall be submitted as per detailed instructions given in the Special Instructions to Tenderer, to **The Registrar, Cotton University, Panbazar, Guwahati-781001**, so as to reach within the specified time of the last date of submission of the tender.

11. Late tenders will not be considered. No responsibility will be taken for postal delay or non -receipt of Bid documents. Unsealed bids or bids sent by FAX or e-mail, will not be considered.
12. **Evaluation of the techno-commercial bids:** The techno- commercial bids shall be evaluated strictly on the basis of eligibility criteria specified in clause-9 above and also elaborated in the special conditions of contract and technical specifications. Fulfilment of the eligibility criteria shall be based on the information, documents furnished along with the tender. It is the responsibility of the bidder to submit all the relevant information supported with necessary document to establish the fulfilment of each of the eligibility criteria in full, whether specifically asked to be filled up in the attached formats/ annexure or not. The bid shall be liable for rejection for non fulfilment or partial fulfilment of any of the eligibility criteria.
Further, fuel efficiency of the offered DG set shall be taken into consideration in the evaluation. Prices shall be loaded for fuel consumption above the benchmark fuel consumption as per details specified in clause 17 of the General Conditions of Tender.
13. The Price Bids of only the eligible bidders shall be opened in presence of their authorized representatives, on a date, to be intimated to them (the eligible bidders). The price bids of only those bidders will be opened whose bids have been found eligible as per the terms mentioned in the Special Conditions of Contract. Interested bidders are requested to carefully study the eligibility criteria stated in the Special Conditions of Contract. All eligibility conditions have to be satisfied on the date of submission of the bid and not on a later date. The date and time of opening of the technical bids/ price bids will not be postponed due to the non-presence of any bidder or his authorised representative.
14. **Rejection of Bids:** Canvassing by the bidder in any form, unsolicited letter and post tender correction, unsigned bids shall be summarily rejected and may lead to forfeiture of EMD. Conditional tenders will also be rejected. Cotton University reserves the right to cancel/reject any/all the tenders without assigning any reason thereof.
15. **Completion period:** The successful bidder will have to complete the works within three months from the date of conclusion of the contract or signing of work order unless the period is extended by mutual agreement.
16. The authority of Cotton University may accept or reject any or all the bids in part or in full without assigning any reason and does not bind itself to accept the lowest bid.

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The University, at its discretion, may change the quantity / upgrade the criteria / drop any item or part thereof at any time before placing the Purchase Order.

17. A bid submitted with false information will not only be rejected but also the EMD submitted by the bidder will be forfeited. Further, the OEM/Vendor may be debarred from participation in future tendering process.

Registrar,
Cotton University

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11/12/2020

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COTTON UNIVERSITY

Submission of Tender

From :.....

To
The Registrar
Cotton University
Panbazar, Guwahati – 781 001

I / We hereby tender for execution of the work of design, manufacture, supply, installation, testing & commissioning of 1 x 500 KVA Silent D.G. Set at Cotton University as per tender within the time schedule mentioned therein as separately signed and accepted by me / us, at the schedule of rates quoted by me / us for the whole work in accordance with Notice Inviting Tender, General Conditions of Tender, Special Instructions to Tenderer, Technical Specifications, workmanship, drawings, other documents and papers, all as detailed in the tender documents.

1. It has been explained to me / us that the time stipulated for job and completion of works in all respects and in different stages mentioned in the "Time schedule" of completion of job and signed and accepted by me / us is the essence of the Contract. I / We agree that in the case of failure on my / our part to strictly observe the time of completion mentioned for jobs or any of them and to the final completion of works in all respects according to the schedule set out in the said "Time Schedule of Completion of Job", I / We shall pay compensation to the Owners as per provision and stipulations contained in clause – 1.19 of General conditions of Tender and I / We agree to recovery being made as specified therein. In exceptional circumstances extension of time which shall always be in writing may, however, be granted by the Engineer-in-Charge at his entire discretion for some items of work, and I / We agree that such extension of time will not be counted for the extension of completion dates stipulated for job and for the final completion of works as stipulated in the said "Time Schedule" of Completion of Jobs.
1. I / We agree to pay the earnest money and security deposit and accept the terms and conditions laid down in the memorandum below in this respect.

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MEMORANDUM

(a) General description of work
.....
.....

(b) Earnest Money Rs.....
(Rupees).....
.....

The Earnest money is payable in the manner set out in para 5 below. The Earnest money, if the tender is accepted, will be retained against the security deposit when Earnest Money is paid in cash or demand draft only.

(c) Security Deposit 5% of the contract amount which will be paid in the manner set out in clause (1.14) in Section – I of the General Conditions of Tender

(d) Time allowed for starting work : Fifteen days from the date of issue of letter of acceptance of the tender

4. Should this tender be accepted I / We hereby agree to abide by and fulfill all terms and conditions referred to above and in default thereof, to forfeit and pay to the Owner or its successors or its authorized nominees such sums of money as are stipulated in conditions contained in Notice Inviting Tender and other tender documents.

5. If I / We fail to commence the work specified in the memorandum in para (3) above, or I / We fail to deposit the amount of security deposit specified in the Memorandum in para (3) above, I / We agree that the said Owner and its successors without prejudice to any other right or remedy be at liberty to forfeit the said earnest money in full otherwise the said earnest money shall be retained by Owner, towards the security deposit specified in para (3) above. The said Owner shall also be at liberty to cancel the notice of acceptance of tender if I/We fail to deposit the security amount as aforesaid or to execute an agreement or to start work as stipulated in the tender documents.

I / We enclose herewith evidence of my/ our experience of execution of work of similar nature and magnitude carried out by me/ us in the prescribed proforma.

Date.....day of.....2020

Witness :

Name in Block Letters :

Address :

Signature of Tenderer(s),with the seal of Firm

Signature
11/9/2020

PROPOSAL PARTICULARS & VENDOR INFORMATION

1. Tenderer's complete Company Name & Address :

2. Tenderer's proposal no. :
3. Tenderer's proposal date :
4. Tenderer's proposal validity period :
5. Whether Earnest Money & Cost of Tender Document deposited ? If so, furnish amount, bank name & DD no-
 - a) EMD :
 - b) Cost of tender document :

6. Name and designation of the officer of the tenderer to whom all reference shall be made for expeditions technical co-ordination. :
7. Make & capacity of the D.G. Sets offered :
8. Are you the OEM of D.G. Sets tendered for or accredited agent/ dealer of the OEM ? :
9. Whether dealership/ authorization certificate from the OEM furnished? :
10. Complete period for delivery, installation, testing & commissioning :
11. Performance guarantee period for the equipment offered from the date of commissioning :
12. Particulars of past experience of execution of similar projects furnished ? :
13. Whether the brand of D.G. engine offered has service centre in Guwahati ? :
 - a) Address and contact no :

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- b) How long the service centre has been :
operating in Guwahati
- c) Whether relevant details against (a) & (b) :
above has been furnished ?
14. GST No :
Copy of the GST Registration certificate
enclosed?
15. PAN No :
Copy of PAN Card enclosed ? :
16. Audited balance sheet for last three financial :
years enclosed?
17. Bank details :
Bank name :
Branch name :
Bank MICR Code :
Account No :
Type of account :
IFSC Code :

Date :

(Signature of the tenderer)

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SECTION - 1

GENERAL CONDITIONS OF TENDER

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DEFINITION OF TERMS

In the contract documents as herein defined where the context so admits, the following words and expressions will have the following meanings :

1. "The Owner" means the Cotton University having its office at Panbazar, Guwahati.
2. The "Purchaser" means the Cotton University having its office at Panbazar, Guwahati.
3. "The Contractor / Supplier" means the person or the persons, firm or company whose tender has been accepted by the Owner and includes the Contractor's legal representative, his successor and permitted assignees.
4. The "Engineer-in-Charge" shall mean the person designated as such by the Owner and shall include those who are expressly authorized by the Owner to act for and on his behalf for operation of this contract.
5. The "Work" shall mean the works to be executed in accordance with the contract or part thereof as the case may be and shall include all extra, additional altered or substituted works as required for the purpose of the contract.
6. The "Permanent work" means and includes works as will be incorporated in and form a part of the work to be handed over to the Owner by the Contractor on completion of the contract.
7. "Construction Equipment" means all applications and equipment of whatsoever nature for the use in or for the execution, completion, operation or maintenance of the work unless intended to form part of the Permanent work.
8. "Site" means the areas on which the permanent Works are to be executed or carried out and any other places provided by the Owner for purpose of the contract.
9. "Contract Document" means collectively the Tender Document, Designs, Drawings, Specifications, agreed variations, if any, and such other documents constituting the tender and acceptance thereof.
10. "The Sub-Contractor" means any person or firm or Company (other than the Contractor) to whom any part of the work has been entrusted by the Contractor, with the written consent of the Engineer-in-Charge, and the legal personal representatives, successors and permitted assigns of such person, firm or company.

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11. The "Contract" shall mean the Agreement between the Owner and the Contractor for the execution of the works including therein all contract documents.
12. The "Specification" shall mean the various technical specifications attached and referred to in the tender documents. It shall also include the latest edition including all addenda/corrigenda of relevant Indian Standard Specifications published before entering into Contract.
13. "The Drawings" shall include maps, plans and tracings or prints thereof with any modifications approved in writing by the Engineers-in-Charge and such other drawings as may, from time to time, be furnished or approved in writing by the Engineer-in-Charge.
14. The "Tender" means the tender submitted by the Contractor for acceptance by the Owner.
15. The "Alteration Order" means an order given in writing by Engineer-in-Charge to effect additions to or deletion from and alteration in the work.
16. The "Completion Certificate" shall mean the certificate to be issued by the Owner when the works have been completed to his satisfaction.
17. The "Final Certificate" in relation to a work means the certificate issued by the Owner after the period of liability is over.
18. The "Period of Liability" in relation to a work means the specified period from the date of issue of completion certificate upto the date of issue of final certificate during which the Contractor stands responsible for rectifying all defects that may appear in the works.
19. The "Appointing Authority" for the purpose of arbitration shall be the Registrar, Cotton University, Panbazar, Guwahati or any other person so designated by the Owner.

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SECTION – 1

GENERAL CONDITIONS OF TENDER

1.1 Scope of work :

The scope of work under this contract shall include Design, manufacture, supply, delivery to Cotton University, Panbazar, Guwahati properly packed for transportation including loading / unloading etc. of 1 x 500 KVA “Prime Power” rating as per Clause 13.3.2 of ISO-8528 (Part-1) at 0.85 load factor, 415 V, 1500 RPM high speed Diesel Generating set complete with acoustic enclosure. The engine shall be capable of delivering the specified Prime Power rating at variable loads for power factor of 0.8 lag with 10% overload available in excess of the specified output for one hour in every 12 hours and include all accessories and works as detailed in Section – III – Scope & Technical Specification (incorporated in the document) and Bill of Quantities incorporated in the Part – II (Price Bid) of the Tender Document.

1.2 Time Schedule:

The entire work shall be completed within a period of 3 (three) months from the date of issue of Letter of Intent.

- 1.2.1 The tenderer shall submit a detailed programme of supply, installation, testing & commissioning along with the tenders.
- 1.2.2 The tenderer shall also submit the details of manpower proposed to be deployed for the installation, testing & commissioning work matching with the nature, volume of work and the schedule time of completion in the relevant Annexures.

1.3. Standards and regulations:

All equipment, materials and works shall comply with applicable provisions of the latest revision of Indian Standards, Indian Electricity Rules, Indian Electricity Act, Indian Explosive Act and other applicable statutory provisions, rules and regulations.

- 1.3.1 The following standards (Latest issues) are considered relevant to this specifications :

- i) BS : 649 / : Diesel engine for general purpose
IS : 1002
- ii) BS : 2613 : Electrical performance for rotating electrical machines
- iii) BS : 159 : Bus bars and bus bar connection
- iv) IS : 4722 : Rotating electrical machines
- v) IS : 2516 : Alternating current circuit breakers
- vi) IS : 2705 : Current Transformers
- vii) IS : 3156 : Voltage Transformers

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- viii) IS : 1243 : Electrical indicating instruments
- ix) IS : 1651 : Stationary cells & batteries of lead acid type
- x) IS : 1554 : PVC insulated (Heavy duty) electric cable for voltages up to and including 1100 V
- xi) IS : 2147 : Degree of protection provided by enclosures for low voltage switchgear and control gear
- xii) IS : 4237 : General requirements for switchgear and control gear for voltages not exceeding 1000 V
- xiii) IS : 3231 : Electrical relays for power system protection
- xiv) IS : 7098 : XLPE power cable

1.4. Erection equipment:

No tools and tackles either for unloading or for shifting the equipments or for erection purpose would be made available by the department. The successful tenderer shall make his own arrangement.

1.5. Drawings and manuals to be furnished by the Tenderer :

1.5.1 After award of the supply / work order :

Every offer shall include complete detailed technical literature performance data including test certificates. Operations, maintenance and spare parts manuals have to be furnished by the successful tenderer / contractor.

The successful tenderer shall furnish in duplicate the following drawings within a fortnight of issue of the supply / work order for approval by the Cotton University —

- i) Details of foundations for the D.G. Sets
- ii) Layout drawing
- iii) Electrical layout & control schematic drawings.
- iv) AMF Panel drawings

1.5.2 Before commencement of the installation :

The above drawings with modifications etc. duly incorporated shall be resubmitted to the Engineer-in-Charge in triplicate along with any special instructions with regard to handling, storage and installation well before the installation.

1.5.3 Complete drawing :

- i) On completion of the work, detailed drawings showing the details of equipments and wiring as installed shall be submitted in triplicate. Maintenance instructions and procedure shall also be submitted with the same.
- ii) Out of the 3 sets of drawings one shall be suitably laminated and displayed at a prominent place in the power house.

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1.6. Works to be carried out by the department :

Unless otherwise mentioned in the tender specification, the following work shall be carried out by the Institute :

- i) Construction of the building to house the AMF Panel
- ii) Electricity required for installation, testing & commissioning.

1.7. Work to be done by the contractor ;

- i) All minor building work necessary for installation of equipment such as cutting and making good the damages grouting the bolts etc. care shall be taken while installing the equipments to avoid damage to the building.
- ii) Foundation of the DG set.
- iii) Supply, installation, testing, commissioning of the DG set and AMF panel.
- iv) Supply and laying of power and control cable from DG to AMF panel.
- v) All necessary supports, anti-vibration pads etc. including grouting them, as required.
- vi) All pipes and connections.
- vii) Tools and tackles required for handling and installation of equipments.
- viii) Protection required for equipments form rain, dust etc. during transportation and storage.
- ix) Necessary testing equipments for commissioning.
- x) Watch & ward of equipments / installations till their handing over to the department.
- xi) All electrical works shall conform to the Indian Electricity Rules. Contractor shall arrange for getting statutory approval / permission from the Electrical Inspectorate.

Similarly, conformity / statutory permission etc. as required, under Indian Electricity Rules / State Pollution Control Board etc. shall be ensured and arranged by the contractor at his own cost.

1.8. Inspection and testing :

- 1.8.1 The DG set with all major items/ equipments i.e. engine and alternator in assembled condition, associated control panel etc. shall be offered for inspection testing by the authorized representative of the University before dispatch at the factory/ manufacturer's works.. A clear 20 days notice shall be given for inspection.
- 1.8.2 DG set will be tested as per relevant IS for loading and overloading (110% for one hour in 12 hours). Also, fuel consumption specified in the guaranteed technical parameters shall be measured. Any defect/ abnormality noticed during testing shall be rectified. Testing shall be done as per CPWD specification. The testing will be declared successful only when no abnormality/ failure is noticed

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during the testing. The DG set will be cleared for dispatch to site only when the testing is declared successful by authorized representative of the University.

1.9 Type approval/ Conformity Verification Certificate (COP) :

1.9.1 The offered capacity of the DG set by the manufacturers/ assemblers of the DG set must possess valid compliance certificates under CPCB norms as stated below and copies of such compliance certificates shall be enclosed along with the Techno-Commercial Bid. **Upon failure to attach such certificates, the bid shall be liable for rejection.**

- a) Conformity of Production Verification Certificate (COP) for noise limit obtained from any of the following agencies-
 - i) Fluid Control Research Institute (FCRI)
 - ii) Automotive Research Association of India (ARAI)
 - (iii) National Aeronautics Laboratory (NAL)
 - iv) International Centre for Automotive Technologies (ICAT)
- b) Conformity of Production Verification Certificate (COP) for engine emission obtained from any of the following agencies-
 - i) Automotive Research Association of India (ARAI)
 - ii) International Centre for Automotive Technologies (ICAT)
 - iii) Vehicle Research Development Establishment (VRDE)

1.10 Training of operating personnel.

The successful tenderer shall have to arrange for training of the operators of the University at the site for a period of 2 (two) days after successful commissioning of the set. The training shall include all details pertaining to operation, regular & periodic maintenance, trouble-shooting of the D.G. Set & accessories including safety aspects. Necessary certificates shall be issued by the company to the operators after successful completion of the training programme.

The schedule of the training programme along with course details shall be submitted for approval, prior to commencement of the programme.

1.11 Payment term :

Standard payment shall be as follows :

- i) 100% payment will be released after successful installation, testing and commissioning and handing over of the plant.

No payment against para a & b above shall be released unless the security deposit as per clause no.1.14 is deposited.

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1.12 Price escalation :

The prices shall be firm till completion of supply, delivery, installation & commissioning.

1.13 Taxes :

- a) For supply parts, ex-works price, GST, packing & transportation charge and transit insurance shall be quoted separately as per the format given in the Part – II of the tender.
- b) Income Tax”, if applicable shall be deducted at source as per prevailing rules & rates.

1.14 Security Deposit :

- 1.14.1 A sum of 5% of the total value of the contract shall be deposited by the successful tenderer within 15 days from the date of issue of the Letter of Intent.
- 1.14.2 The security deposit amount may be furnished by (a) Demand Draft, or (b) Bank Guarantee of State Bank of India or any schedule ‘A’ bank in favour of Registrar, Cotton University, payable at Guwahati, valid for the entire guarantee period.
- 1.14.3. The security deposit shall be retained by the University till successful completion of the performance guarantee period.
- 1.14.4. If the supplier / contractor fails or neglects to observe, perform any of his obligation under the contract either in respect to supply, installation, testing and commissioning of the equipment or in respect to the guarantee period, it will be lawful for the ‘Purchaser’ / ‘Owner’ to forfeit either in full or in part at his absolute discretion, the security deposit furnished by the supplier.
- 1.14.5. No interests shall be payable on such deposits.

1.15 Earnest Money:

- 1.15.1. Earnest money prescribed in the NIT shall be paid in the shape of Bank Call Deposit / Bank Draft payable in favour of the Registrar, Cotton University, Guwahati.
- 1.15.2. In case of unsuccessful tenderers, earnest money will be released.
- 1.15.3. In case of successful tenderer, the earnest money will be retained until submission of the security deposit referred to in the clause 1.14.
- 1.15.4. No interest shall be payable on such deposits.
- 1.15.5. The Purchaser / Owner reserves the right to forfeit the EMD or part thereof, in circumstances which according to him indicate that the tenderer is not earnest in accepting / executing the order(s) placed under this specification.

1.16. Guarantee and Warranty :

- 1.16.1. Major part of the installation i.e. engine and alternator with all accessories, controllers etc. shall be covered under guarantee/ warranty by the bidder/ OEM for a minimum period of two years or 5000 hrs of operation whichever is earlier, from the date of acceptance against unsatisfactory performance and / or breakdown due to defective materials, design, manufacture and / or installation. The guarantee/ warranty shall be covered by condition that if the whole

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installation or any part of the installation / materials thereof is found defective within two year from the date of taking over, shall be replaced or repaired by the contractor free of charges. The minimum period of warranty/ guarantee for two years from the date of acceptance (or 5000 hrs of operation whichever is earlier) shall be considered as a mandatory criteria to be fulfilled. Bid with guarantee/ warranty lower than above shall be liable for rejection. The recommended schedule of maintenance services during the above period shall be clearly specified in the tender. The bidder or the authorized service agent of the OEM shall provide free onsite maintenance services during this period as per the recommended schedule. The consumable items requiring replacement during each of the scheduled maintenance services shall be clearly specified in the bid.

1.16.2. If any of the bidder provides extended warranty from their OEM beyond the mandatory two years as stated above, weightage may be given in the evaluation, at the discretion of the owner. Terms of such extended warranty shall be clearly specified in the tender.

1.17. Fuel consumption:

1.17.1. Fuel efficiency of the DG set offered shall be given due importance in the evaluation. For level comparison, quoted price shall be loaded with fuel consumption data guaranteed by the OEM. Therefore the bidders/ OEMs are requested to quote the guaranteed fuel consumption data of the offered DG set against item 5.4.1 (xxi) of Section-5- Bidding Schedule- Technical Bid, which shall be supported by the catalogue of the offered DG set of the OEM. The fuel consumption data shall be guaranteed for at least 2500 Hrs of operation or 2 years, whichever is earlier.

1.17.2. Loading factors for fuel consumption: The bench mark fuel consumption at 75% of the rated load is 77 ltrs/hr(LPH). The fuel consumption indicated by the party shall be guaranteed for 2500 hours of operation or two year, whichever is earlier. The DG set with higher fuel consumption shall be loaded for extra cost of fuel as per the loading given below.

a. The DG set with fuel consumption more than 110% of the bench mark (i.e. above 84.7 LPH) shall be technically disqualified.

b. DG set consuming below 77 LPH shall be considered at par and nil fuel consumption loading shall be applied.

c. DG set with fuel consumption less than 77LPH and between 77 LPH to 84.7 LPH shall qualify for the tender and the differential fuel cost for intended use (2500 HRS) at prevailing fuel cost (HSD) in Assam on the date of submission of the tender would be added to offered price of DG set.

1.18. Delivery schedule as per contract :

i) Normally, the delivery schedule as stipulated in the NIT or tender specification shall be offered in the purchase order and shall be binding on the successful tender. For the purpose of reckoning delivery period the date of dispatch will be counted as the effective date.

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- ii) In case of the successful tender offering a different delivery schedule, the "Purchaser" reserves the right to alter the delivery schedule through negotiation.
- iii) The date of commencement of the delivery schedule of the purchase order will be deemed to be effective from the date of issue of the purchase order.
- iv) Should progress be delayed by strikes, lockouts, fire accidents, delay in approval of drawings or any cause whatsoever beyond reasonable control of the Contractor and whether such delay or impediment occur before or after the time or extended time for dispatch or completion, reasonable extension of time may be granted on the application made by the contractor in writing to the Purchaser but without prejudice to other terms and conditions of the contract.
- v) Price variation, if any, applicable as per purchase order shall not apply to any quantity not delivered as per delivery schedule of the purchase order. If however the prices in respect of delayed deliveries are found to have gone down, payment will be made at the reduced prices or penalty levied at the discretion of the purchaser.

1.19. Delay in Delivery / Completion of work:

The date of delivery / completion of work shall be deemed to be the essence of the contract. The delivery and the installation shall be completed not later than the date specified in the purchase order / contract. In case of failure to deliver the materials / equipments in full and complete the work within the stipulated period or delay in the erection work, the "Purchaser" shall be entitled –

- i) To recover liquidated damage at the rate of ½% (half percent) of the total value of the undelivered materials or materials delivered late or of the value of incomplete work per week of delay or part thereof subject to a maximum of 10% (ten percent) of the total value of the contract price.
- ii) To purchase the undelivered materials / equipment from elsewhere giving notice to the supplier and to recover any extra expenditure incurred thereby for having to purchase these materials at higher price at the risk and cost of the contractor.
- iii) To cancel the contract wholly or in part and to purchase materials / equipment at the full risk and cost of the contractor and forfeit the earnest money and / or security deposit.

1.20 Contractual Failure:

In the event of the contractual failure of any respect on the part of supplier, the "Purchaser" shall be entitled to operate security deposit or any deposit or any payment due to supplier irrespective of whether his default relates to the particular orders or not, towards the Purchaser's claim for damages arising out of the failure. In addition, Cotton University may black-list or ban the "Contractor" or pending enquiry, suspend him or take any other steps considered suitable.

1.21 Rejection:

In the event, any of the equipment supplied by the contractor is found defective in materials or workmanships or otherwise not in conformity with the requirements of the contract specification, the purchaser shall either reject the equipments, or request

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the contractor in writing to rectify the same. The contractor, on receipt of such notification shall either rectify or replace the defective equipment free of cost to the purchaser. If the contractor fails to do so, the purchaser may :

- a) At his option, replace or rectify such defective equipment and recover the extra cost so involved from the contractor plus 15% (fifteen percent), or
- b) Terminate the contract for default,
- c) Acquire the defective equipment at a reduced price as considered equitable under the circumstances. The provision on this article shall not prejudice the purchaser's right under clause 1.19.

1.22. Force majeure :

Normally force majeure shall cover only act of God, fire, war, strikes, riots and civil commotion, act of Government etc. Any constraints other than those specified above will not constitute force majeure condition. In view of other constraint beyond the control of the supplier primarily due to statutory compulsion, extension of delivery may also be considered on individual merit of the case. In case of force majeure condition the contractor shall notify the purchaser such conditions within 10 (ten) days from the beginning of such delay in writing for consideration and acceptance.

1.23. Change of name of the tenderer :

- a) At any stage after tendering the "Purchaser" shall deal with supplier only in the name and the address under which he has submitted the tender. All the liabilities / responsibilities for due execution of the contract shall be that of the supplier / and in circumstances he shall be relieved of any litigations under the contract. The "Purchaser" may however, in his discretion deal with agents / representatives / distributors / manufacturers / associaters / principals / sister concerns and such dealings shall not absolve the supplier(s) from the responsibilities / obligations / liabilities to the "Purchaser" under the contract.
- b) Any change / alteration of name / constitution / organization of supplier shall be duly notified to the "Owner" and the owner reserves the right to determine the contract, in case of any such notification. In the event of such determination, the "Owner" may effect the purchasers of the materials not supplied, from elsewhere at the risk and cost of the tenderer / supplier.

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SECTION - 2

SPECIAL INSTRUCTIONS TO TENDERER

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SECTION – 2

SPECIAL INSTRUCTIONS TO TENDERER

- 2.1.** Tenders are invited for Design, manufacture, supply, delivery to Cotton University, Panbazar, Guwahati properly packed for transportation including loading / unloading etc. of 1 x 500 KVA “Prime Power” rating as per Clause 13.3.2 of ISO-8528 (Part-1) at 0.85 load factor, 415 V, 1500 RPM high speed Diesel Generating set complete with acoustic enclosure. The engine shall be capable of delivering the specified Prime Power rating at variable loads for power factor of 0.8 lag with 10% overload available in excess of the specified output for one hour in every 12 hours and include all accessories and works as detailed in Section – III – Scope & Technical Specification (incorporated in the document) and Bill of Quantities incorporated in the Part – II (Price Bid) of the Tender Document.

Tenderer is advised to read these instructions carefully to ensure that his response complies fully therewith. Failure to provide the information and documents required by this invitation to tender may render the tender to be unacceptable. For tenderer’s convenience, this section is divided into three main sections as follows —

- a) General Conditions of Tendering
- b) Qualifying requirement
- c) Proposal of the tenderer

2.2. General Conditions of Tendering :

- 2.2.1.** Two sets of tender documents are issued / sent herewith marked “Original” and “Tenderer’s Copy”. Tenderers shall submit the “Original” along with their offers and “Tenderer’s Copy” shall be retained by him as his reference copy. (applicable only in case, tender documents are issued by the University)

Tenderer shall sign each page of Original copy (in case tender documents are issued by the University, else the downloaded copy) with office seal as token of his acceptance.

2.2.2. Tender Validity :

Tender shall remain valid for acceptance for a period of 120 (one hundred twenty) days from the date of opening of the tender. The tenderer shall not be entitled during the said period, to revoke or cancel his tender or to vary the tender given or any term thereof. In case of tenderer revoking or canceling his tender or varying any term in regard thereof, the owner shall forfeit the earnest money paid by him along with the tender. The tender shall be revalidated for extended period as required by owner in writing.

2.2.3. Submission of Tender :

- a) Tenders must be submitted by the time and date mentioned in the Notice Inviting Tender in the office of Cotton University at the address stated in para (c) hereunder. The University takes no responsibility for any delay, loss or non receipt of tender documents sent by post. Tenders received after the time and date fixed for receipt of tenders are liable for rejection.

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- b) Priced and Unpriced parts of the tender must be submitted in separate sealed covers in tow parts as follows :

PART – I : TECHNO-COMMERCIAL (UNPRICED) BID

This part shall contain techno-commercial (unpriced) proposal, required as per para 2.4.1 hereinafter. The tenderer shall also submit subsequent correspondences in two copies.

Part – I of the tender i.e. the Techno-Commercial (Unpriced) Bid shall be opened on the time and date as given in the tender notice. The owner shall evaluate Techno-Commercial bid and Part – II (Priced) bid of only those tenderers who are found qualified shall be opened at a later date to be notified to the qualified tenderers. Price bid of other tenderers shall be rejected.

PART – II : PRICE BID

This part of the tender shall contain bill of quantity duly filled in, signed & sealed in two copies.

- c) Tenderers must submit tender including queries if any, at the following office :

**The Registrar,
Cotton University
Panbazar, Guwahati – 781 001**

- d) The tender and all details submitted subsequent to the tender shall be signed by any one, legally authorized to enter into commitment on behalf of the tenderer. Tenderer shall submit power of attorney in favour of the person who is authorized to enter into commitments on behalf of the tenderer.

Owner will not be bound by any power of attorney granted by the tenderer or changes in the constitution of the firm made subsequent to submission of the tender or the award of the contract. The owner may, however, recognize any such power of attorney and changes after obtaining proper legal advice, the cost of which will be chargeable to the tenderer.

The cancellation of any document such as power of attorney, partnership deed etc. should be communicated by the tenderer to the owner in writing well in time, failing which it shall have no responsibility or liability for any action taken by it on the strength of the said documents.

2.3. Qualifying requirement/ Eligibility criteria :

Bidders are informed that the owner intends to fully evaluate the technical ability of the firms. It is therefore, very important that bidders clearly demonstrate their ability, giving the owner a high level of confidence that the bidders have the technical, financial and infrastructural capability to execute the job up to the satisfaction of the owner within scheduled time, meeting all the tender requirements. Therefore, following minimum qualifying criteria have been laid for selection of the responsive bids. Bid(s), not fulfilling any one or more of the minimum qualifying criteria shall be considered as non responsive.

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Bidders are therefore requested to carefully study the tender document and furnish all relevant documents, narratives required for fulfillment of the qualifying criteria mentioned below.

- 2.3.1. The bidder must be an OEM or authorized dealer of the brand of the DG set offered. In case, the bidder is an authorized dealer, he (or the firm) must have been under such dealership agreement with the OEM for not less than 3 years. Relevant certificate in support shall be submitted. Authorization certificate from the OEM for participation for this particular tender only, shall not be accepted.
- 2.3.2. The diesel engine and alternator of the offered DG set must be from the approved makes listed in **Clause 3.6 of Section-3- Scope & Technical Specification**.
- 2.3.3. The bidder must have experience in execution of at least 4 (four) works of supply, installation, testing & commissioning of D.G. Sets of the brand offered in this tender, having capacity not less than 500 KVA during last 7 (seven) years at any Govt. / Semi Govt. Departments or Autonomous Body supported by both work order and completion certificate from clients. Out of the aforementioned service experiences, at least two works must have been executed in Assam.
- 2.3.4. The brand of the engine offered, must have authorized service centre in Guwahati. Documentary evidence of such service centre located at Guwahati, must be submitted along with the Techno-Commercial Bid.
- 2.3.5. The offered model & capacity of the DG set must possess valid compliance certificates under CPCB norms for noise and emission. Copies of such compliance certificates shall be enclosed.
- 2.3.6. Annual turnover in last 3 (three) years should be at least Rs. 35 lakhs.
- 2.3.7. The bidder should submit technical specification bid format, statement against each point of the technical specifications (Section-5, Bidding Schedule, Technical Bid) along with this offer. Overall single compliance statement is not acceptable. In the absence of point-wise compliance statement, the offer is liable for rejection.

2.4. Organisation :

- a) In case the tenderer is a partnership firm, certified copy of the partnership deed together with a certified extract from the register of firms containing names and addresses of all the partners of the firm should be furnished along with the tender.
- b) In case of the company (whether private or public), certified copy of the certificate of incorporation together with certified Memorandum of Articles of Association and a list containing names and address of all the directors should accompany the tender.
- a) In case of a proprietorship firm, the name and address of proprietor, should be furnished.

The contractor shall also submit an organization chart of the proposed manpower engagement for the installation, testing & commissioning work.

2.5. Project scheduling & Monitoring :

The tenderer shall follow project schedules and monitor progress in accordance with the **bar chart** covering all major activities to be submitted along with the tender.

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2.6. Financial Documents :

The tenderer shall submit last three financial year's audited balance sheet as supporting document for the minimum annual turnover specified as one of the eligibility criteria. Further copies of the PAN card, GST registration certificate and bank details as asked in the Proposal Particulars shall be furnished.

2.7. Pricing Requirements :

- a) All rates set forth in tenderer's quotation, shall be in Indian Rupee as payment shall be made only in the Indian currency.
- b) The rate should be written both in figures and words. In case of difference between the two, the one, which is justified from the amount (entered in the amount column), shall be considered as correct. In case the rate in figure and words are same but the amount does not match with the rate multiplied by quantity, then the amount shall be considered as wrong and the same shall be corrected.
- c) **The tenderers are requested to furnish the rebate, if any, only in the last page of 'Schedule of Rates' only. Rebate, if offered at any other place, shall be considered INVALID.**

2.8. **Proposal of the tenderer.** The tenderers shall arrange their tenders in the following order :

2.5.1. Part – I (Techno-commercial Bid) –

- a) Submission of tender letter along with original set of tender document and drawings duly signed and sealed.
- b) Earnest Money Deposit and its details
- c) Cost of tender paper..
- d) List of similar project executed during last 7 (seven) years as per Annexure – I
- e) Performance record of the offered brand of D.G. Set as per Annexure – II
- f) Details about authorized spare parts dealer as per Annexure – III
- g) Details about authorized service dealer as per Annexure – IV
- h) Project Schedule
- i) GST registration certificate
- j) Copy of Pan no.
- k) Proposal Particulars and Vendor information duly filled up as provided before section-I of the tender document
- l) Compliance to requirement of tender document as per Annexure – V
- m) Warranty/ Guarantee as per Annexure-VI
- n) Validity of tender as per Annexure – VII
- o) Deviation sheet of Technical Specification in Annexure – VIII
- p) Deviation sheet of Tendering & General Conditions in Annexure – IX
- q) Electrical contractor's licence

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- r) Compliance certificate for noise and emission as per Clause 1.9 of the General Conditions of Tender
- s) Catalogue of the DG set with key technical particulars
- t) Audited balance sheet of last three financial years
- u) Section-5- Bidding Schedule- Technical Bid, duly filled up
- v) Any other relevant document tenderers wish to furnish.

2.5.2 Part – II (Price Bid) –

- a) Bill of quantity duly filled in along with proposal particulars

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SECTION - 3

SCOPE & TECHNICAL SPECIFICATION

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SECTION – 3

SCOPE & TECHNICAL SPECIFICATION

3.1 SCOPE :

The scope of supply and works covered under this specification shall include —

A Supply :

Design, manufacture, supply, delivery to Cotton University, Panbazar, Guwahati-01 properly packed for transportation including loading / unloading etc. of 1 x 500 KVA “Prime Power” rating as per Clause 13.3.2 of ISO-8528 (Part-1) at 0.85 load factor, 415 V, 1500 RPM high speed Diesel Generating set. The engine shall be capable of delivering the specified Prime Power rating at variable loads for power factor of 0.8 lag with 10% overload available in excess of the specified output for one hour in every 12 hours, comprising of following items / accessories as specified in item 3.5.

- i) Diesel Engine and accessories including exhaust silencers.
- ii) Day fuel tank of Capacity not less than 990 ltr.
- iii) Alternator
- iv) Dynamically balanced flywheel.
- v) Air cleaner (Dry/ Oil bath type) as per manufacturer’s recommendations.
- vi) Dry exhaust manifold with suitable exhaust residential grade silencer to reduce noise level.
- vii) Engine Control Panel having digital display and fitted with following-
 - a) Start up key switch
 - b) Lube oil pressure indication
 - c) Water temp indication
 - d) RPM indicator
 - e) Engine operating hour indication
 - f) Battery charging indication
 - g) Lube oil trip indication
 - h) High water temp indication
 - i) Over speed indication
- viii) Suitable self starter (24V DC), as per manufacturer’s standard
- ix) Battery charging alternator unit and voltage regulator suitable for starting batteries, battery racks with interconnecting links leads and terminals.
- x) Necessary gear driven oil pump for lubricating oil, priming of engine bearing as well as fuel systems as per manufacturer’s recommendation.
- xi) Naturally aspirated turbo charger (as per manufacturer’s standards)
- xii) Lubrication oil cooler.
- xiii) Lubrication oil filters with replaceable elements.

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- xiv) Crank case heater as per manufacturer's recommendations.
- xv) Suitable fuel injection system in order to achieve low fuel consumption.
- xvi) Fuel control solenoid.
- xvii) Fuel pump with engine speed adjustment.
- xviii) Electronic governor of Class-A1
- xix) Acoustic enclosure with base frame
- xx) Radiator/ Heat Exchanger System
- xxi) Power & control cables for connection / interconnection from the D.G. Sets to AMF Panel. Length of single run may be considered as maximum 20 M
- xxii) Complete earthing of the DG set as per IE Rules.
- xxiii) AMF panel.
- xxiv) Recommended maintenance tools & tackles
- xxv) Recommended spare parts.

B Installation, testing & commissioning :

Installation, testing & commissioning of the equipments mentioned under item (A) along with supply of all accessories required for installation, testing & commissioning of the entire plant including all civil works as specified.

3.2 COMPLETENESS OF TENDER :

The scope of work covered under this specification has been considered as turn-key basis. Any work(s) which has (have) not been specifically included within the scope of this document, but which are considered essential for completeness of the work shall be supplied / installed by the contractor free of cost unless the same is (are) brought to notice and quoted separately in the tender. All fittings, equipments, units, assembles and accessories, hardware, foundation, bolts terminal lugs cable and termination glands for electrical connections, junction box and items which are useful and necessary for efficient operation and installation shall be deemed to have been included in the scope of work. The entire installation shall be complete in all respect, whether such details have been mentioned in the specification or not.

3.3 CIVIL WORKS :

The foundation work of the DG set is included in the scope. Drawings for the foundation work may be furnished for approval.

3.4 PERMISSION / APPROVAL FROM STATUTORY BODIES:

The scope of work of the tenderers shall include obtaining of necessary permissions from statutory bodies for the plant / parts of the plant under Indian Electricity Rules. Necessary assistance required will be provided by the University.

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3.5 TECHNICAL SPECIFICATION :

3.5.1 General :

The 1 x 500 KVA D.G. Sets covered under this specification is proposed to be installed near the BKB Auditorium of the University to cater for the back up power requirement of the auditorium as well as nearby buildings.

- 3.5.2. Diesel Engine :** The engine shall be of standard design of original manufacturers. It should be 4 stroke cycle, water cooled, naturally aspirated/ turbo charged (as per manufacturer's standard), diesel engine developing suitable BHP giving the specified power rating as per ISO-8528- Part-1 in KVA at the load terminals of the alternator at 1500 RPM at actual site conditions.

The engine shall be capable of delivering specified Prime Power rating at variable loads for PF of 0.8 lag with 10% overload available in excess of the specified power output for one hour in every 12 hours. The average load factor of the engine over a period of 24 hours shall be 0.85 (85%) for prime power output.

- 3.5.3. Fuel Tank :** The D.G. sets shall contain a 'Day' fuel tank of capacity not less than 700 ltr. to be installed close to or along with the set. The tank shall be fabricated with the SWG sheet metal complete with drain valve, air vent, inlet & outlet connections.

- 3.5.4. Emissions :** The exhaust from the engine offered shall conform to the norms specified by the Central/ State Pollution Control Boards. This aspect shall be clearly indicated in the Technical Particulars. Copy of the certificate as detailed in Clause 1.9. of The General Conditions of Tender (Section-1) shall be enclosed along with the Techno-Commercial Bid.

- 3.5.5. Starting System :** The starting system shall comprise of necessary set of heavy duty batteries 24V DC (as per manufacturer's standard) and suitable starter motors, axial type gear to match with the toothed ring of the fly wheel. A suitable timer control to protect from over cranking shall be integrated with the engine protection system. The battery capacity shall be suitable for meeting the need of the starting system (three attempt starting) as well as the requirements of control panel, indications and auxiliaries like priming pumps etc.

- 3.5.6. Battery Charger :** The battery Charger shall be suitable to charge the required numbers of batteries at 12V/ 24V complete with transformer, rectifier, charge rate selector switch, indicating ammeters, voltmeters etc including suitable copper links between the charger and batteries.

- 3.5.7. Exhaust System :** The bidders are requested to visit the site for the exhaust piping requirements to meet the CPCB guidelines. The exhaust piping shall be done conforming to CPCB guidelines. Pipes shall be clad with 50mm thick loosely bound resin (LBR) mattress/ mineral wool/ rockwool density not less 12 Kg/ m² complete with aluminium cladding (0.6mm thick) for the complete portion. Exhaust pipe works shall include necessary foundation, support/ supporting structure etc. as per site condition.

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3.5.8. Alternator A.C. Generator shall be rated at 500 KVA, 3 Ph (4 wire system), 415 V, suitable for continuous operation at 1500 RPM. The alternator shall be brushless type, self excited & self regulated through an AVR. Alternator shall generally conform to IS : 4722 / BS : 2613. The alternator shall have following features —

1. $\pm 1\%$ Voltage regulation (max) in static condition
2. $\pm 5\%$ Voltage variation
3. Rated power factor- 0.8 (lag)
4. Rated frequency- 50 Hz
5. Enclosure- SPDP
6. Overload duration/ capacity- 10% for one hour in every 12 hours continuous operation.
7. Excitation- Self excited
8. Type of AVR- Electronic
9. Class I/II insulation
10. Permanent lubricating bearing
11. Permissible overload of 10% for one hour in 12 hours of operation

3.5.9. Acoustic enclosure :

The scope shall include supply & installation of acoustic enclosure for each D.G. sets. The enclosure shall be pre-fabricated, factory built with proper anti-rust treatment in 8 tank process, powder coated and oven dried to ensure durability, protection against corrosion and glossy finish. The enclosure shall have adequate ventilating system so as to throw out the surface heat produced by the D.G. Set. The enclosure shall have necessary sliding door & viewing window for viewing the essential parameters. The enclosure shall have adequate ventilation system to maintain the temperature of the D.G. Set within limit at prescribed load condition. The external noise shall not exceed the limit specified by CPCB. . Copy of the certificate as detailed in Clause 1.9. of The General Conditions of Tender (Section-1) shall be enclosed along with the Techno-Commercial Bid

3.5.10. AMF Panel :

The AMF panel shall be fabricated with 2 mm thick sheet steel, duly treated in 7/8 tank process and powder coated with approved colour. The panel shall be equipped with —

1. Mains 4 pole 1250 Amp. EDO ACB
2. DG 3pole 800 Amp EDO ACB
3. 1250A aluminium bus bar
4. Load terminal with provision of suitable number of cable connection
5. Two sets of CT- 1250/5A for mains and 800/5A FOR DG
6. Two MF meters on mains and DG incomings for measurement of
 - i) Voltage

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- ii) Current
 - iii) Frequency
 - iv) Power factor
 - v) KWH
7. Battery Charger complete with voltage regulator, voltmeter and ammeter for charging the battery from external mains. This will be in addition to the battery charging alternator or dynamo fitted on the engine.
8. All other items/ accessories as per manufacturer's standard

3.6. APPROVED MAKES:

The offer shall comply with the following approved makes of the key components:

- i) ENGINE: CATERPILLAR/ CUMMINS/ KOEL
- ii) ALTERNATOR: STAMFORD/ KIRLOSKAR/ LEROY-SOMER
- iii) ACB: L&T/ SCHNEIDER/ SIEMENS/ ABB
- iv) CONTACTOR: L&T/ SCHNEIDER/ SIEMENS/ ABB
- v) MF METER: L&T/ SCHNEIDER/

IT MAY BE NOTED THAT FOR ITEMS i) & ii), NO DEVIATION SHALL BE ACCEPTED

3.7. COMMISSIONING AND TEST RUN :

After completion of the installation, all recommended commissioning tests on the engine, alternator, switchgear and the complete installation shall be conducted in presence of the representative of the Engineer-in-Charge. The DG Set shall be under trial run at available load for a period of 12 hours or 15 days whichever is earlier. A log of different parameters shall be maintained during this period. The arrangement of staff for trial run for this period will be made by the successful tenderer. However the Diesel shall be provided by the department. The contractor shall be free to do necessary adjustments during the period. The DG Set shall be considered to have successfully completed the trial run, if no breakdown or abnormal/ unsatisfactory operation/ performance of any component of the entire installation included in the scope of work of the contract occurs during the period. After the successful trial run, the DG Set shall be taken over by the University subject to guarantee clause under the contract. The date of taking over of the DG Set after trouble free operation during the trial run, shall be the date acceptance/ taking over.

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SECTION 4

ANNEXURES

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ANNEXURE – I

List of similar projects executed by the bidder during last 7 (seven) years :

Sl. No	Full Postal Address of client & Name of Officer-in-Charge	Description of the work	Value of contract	Date of Commencement of work	Date of completion	Remarks

Note: Original or attested copies of work order and completion certificates from the client should be attached by the applicant without which information furnished shall be considered null and void. Projects involving supply, installation, testing & commissioning of D.G. Set of capacity 500 KVA & above only shall be furnished. Extra sheet may be added if required.

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ANNEXURE – II

Performance record of offered brand of D.G. Sets

Sl. No.	Capacity, voltage	Name of the client & address	Year of commissioning	Present status of performance	Remarks

N.B. :

- i) Copies of certificates showing at least 2 (two) years satisfactory performance of at least 1 (one) D.G. Sets from the above list, in operation in Govt. Deptt. / Undertaking / Autonomous Body, issued by competent authority shall be enclosed.

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(Signature of the Tenderer)

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ANNEXURE – III

Details about authorized spare parts dealer

1. Name of the authorized service dealer :
2. Address :
3. Name of the proprietor :
4. G.S.T. Registration no. :
5. Local Trade Licence No. :
(copy of the trade licence to be enclosed)
6. Whether authorized by the company :
7. Since when the firm has been supported as :
authorized spare parts dealer by the
company.
(copy of the dealership certificate justifying
item 4 & 5 shall be enclosed)

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ANNEXURE – IV

1. Name of the authorized service agent :
2. Address :
3. Trade licence no. :
(Copy to be enclosed)
4. G.S.T. Registration no. :
5. Since when appointed as service agent by the :
company (copy of the authorization certificate
from the company shall be enclosed)
6. A list of D. G. Sets where services have been :
provided during last two years should be
enclosed, the capacity of the D.G. Sets &
name of the clients shall be mentioned
7. Where the service agent has given :
commitment to provide the after sales service
in case the order is placed to the tenderer.
(copy of the letter shall be enclosed)
8. List of manpower :
 - a) No. of Service Engineer :
 - b) No. of Supervisor / Foremen :
 - c) No. of Mechanic :

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ANNEXURE – V

Compliance to requirement of tender documents:

We confirm that our tender complies to the total Techno-Commercial requirements of Bidding document without any deviation.

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ANNEXURE – VI

WARRANTY/ GURANTEE:

Is there any deviation in the guarantee/ warranty envisaged under clause-16 of Section-1- General Conditions of Tender/ If so the same may be specified.	
Is there any extended warranty from the OEM beyond two years? If so, terms of such extended warranty may be specified	
The recommended schedule of maintenance during 2 years warranty period shall be enclosed	

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ANNEXURE – VII

TENDER VALIDITY

Tender shall remain valid for acceptance for a period of 120 (one hundred twenty) days from the date of opening of the tender. The tenderer shall not be entitled during the said period to revoke or cancel his tender or to vary the tender given or any term thereof. In case of tenderer revoking or canceling his tender or varying any term in regard thereof, the OWNER shall forfeit the earnest money paid by him along with the tender. Tender shall be revalidated for extended period as required by Owner in writing.

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ANNEXURE – VIII

Deviation sheet – Technical Specification

If the proposal has got any deviation from the Technical Specification, the Tenderer shall tabulate these deviations clause by clause in this schedule. Add more sheets, if required.

Sl. No.	Clause No.	Deviations

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(Signature of the Tenderer)

ANNEXURE – IX

Deviation sheet – Tendering & General Conditions

If the proposal has got any deviation from the tendering conditions and the General Conditions of Contract, the Tenderer shall tabulate those deviations clause by clause in this Schedule. Add more sheet, if required.

Sl. No.	Clause No.	Deviations

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(Signature of the Tenderer)

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SECTION - 5

BIDDING SCHEDULE – TECHNICAL BID

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SECTION – 5

BIDDING SCHEDULE – TECHNICAL BID

5.1 General :

- 5.1.1 Tenderers name and address :
- 5.1.2 Manufacturer's name and address :
- i) Diesel engine along with accessories :
 - ii) Alternator :
 - iii) Exciter :
 - iv) Automatic Voltage Regulator :
 - v) Diesel generator Instrumentation & Control Panel :
 - vi) D.G. Power Distribution Panel :
 - vii) Air Circuit Breaker :
 - viii) MCCBs :
 - ix) Indicating instruments :
 - x) Cables :
 - xi) Battery and battery charger :
 - xii) Day fuel tank :
 - xiii) Acoustic Enclosure :
- 5.1.3 Tenderer's proposal no. and date :
- 5.1.4 Name and address of the tenderers representative at Guwahati, if any from whom technical as well as commercial clarification can be obtained, with telegraphic address and telephone number. :

5.2 Validity of tender :

5.3 Guaranteed delivery scheme :

5.4 Schedule of guaranteed and other technical particulars :

5.4.1 Diesel Engine -

- i) Manufacturers name :
- ii) Type and model :
- iii) No. of cylinders :
- iv) Prime power rating BHP/ KVA (as per ISO- 8528- Part-1) :

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- v) Cylinder bore and stroke in mms :
- vi) Method of starting :
- vii) Rated speed (RPM) :
- viii) Compression ratio :
- ix) Maximum cylinder pressure :
- x) Compression pressure :
- xi) Fuel injection pressure -
 - a) At full load :
 - b) At no load :
- xii) Fly wheel details -
 - a) Diameter :
 - b) Width of Rim :
 - c) Weight :
 - d) Thickness of Rim :
 - e) Moment of Inertia :
- xiii) Cycle variation :
- xiv) Time required for starting from cold :
- xv) Type of governor :
- xvi) Guaranteed limits of governing -
 - a) Permanent variation
 - i) Full load thrown off :
 - ii) Full load put on :
 - b) Temporary variation
 - i) Full load thrown off :
 - ii) Full load put on :
- xvii) Derated BHP at site under worst conditions :
- xviii) Total speed variation :
- xix) Specification of the fuel oil :
- xx) Specification of lube oil :
- xxi) Guaranteed fuel oil consumption in ltr/hr under site conditions -
 - a) At full load :
 - b) At $\frac{3}{4}$ load :

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- c) at ½ load :
- d) Whether above fuel consumption is guaranteed for 2 years or 2500 hrs of operation, whichever is earlier/ Yes/ No
- xxii) Lube oil consumption/ hour on MCR :
- xxiii) Mechanical efficiency :
- xxiv) Thermal efficiency :
- xxv) Safety protection provided :
- xxvi) Direction of rotation :
- xxvii) Method of aspiration :
-)
- xxviii) Method of cooling :
-)
- xxix) Exhaust temperature at nominal rating :
- xxx) Space requirement :
- xxxii) Gross weight of the unit together with heaviest weight of individual part :

5.4.2 Air filter cum silencer :

- i) Type :
- ii) Name of manufacturer :
- iii) Rated capacity :
- iv) Clear area M² :
- v) Maximum particle size removed :
- vi) Reference to descriptive literature :

5.4.3 Coupling :

- i) Type of flexible coupling provided :
- ii) Shaft sealing arrangement :

5.4.4 Storage tank (day fuel tank) :

- i) Type and shape :
- ii) Capacity :
- iii) Number supplied :
- iv) Materials of construction :
- v) Overall external dimensions :
- vi) Overall internal dimensions :
- vii) Plate thickness :

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- viii) Design pressure and temperature :
- ix) Type of welding and joints :
- x) Weight of completely fabricated tank including all supports and fittings :

5.4.5 Alternator :

- i) Manufacturer's name :
- ii) Manufacturer's type :
- iii) Rated KW capacity :
- iv) Rated KVA capacity :
- v) Rated terminal voltage :
- vi) Rated power factor :
- vii) Rated starter current :
- viii) Rated speed :
- ix) Rated frequency :
- x) Excitation current at the rated power output and power factor :
- xi) Excitation voltage at rated power output and power factor :
- xii) Efficiency at rated power factor at-
 - a) Full load :
 - b) $\frac{1}{3}$ load :
 - c) $\frac{1}{2}$ load :
- xiii) Inherent voltage regulation :
- xiv) Are damper windings fitted on poles :
- xv) Radial clearance between stator and rotor (Air gap)
- xvi) Peripheral speed of the rotor :
- xvii) Critical speed of the rotor :
- xviii) Direction of rotation :
- xix) Class of insulation of alternator windings :
- xx) Method of lubrication :
- xxi) Method of cooling :
- xxii) Maximum temperature rise of stator core over ambient temperature :
- xxiii) Maximum temperature rise of rotor winding over ambient temperature :

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- xxiv) Total weight of the generator excluding foundation :
- xxv) Alternator parameters -
 - a) Synchronous reactance : xd
 - b) Transient reactance : xd'
 - c) Subtransient reactance : xd''
 - d) Zero sequence reactance : x₀
 - e) Negative sequence reactance : x₂
 - f) Short circuit ratio :
 - g) Open circuit field time constant :
 - h) Resistance of field winding at operating temperature :
- xxvi) Generator performance -
 - a) Full load losses : KW
 - b) Armature copper loss : KW
 - c) Rotor copper loss : KW
 - d) Core loss : KW
 - e) Stray losses : KW
- xxvii) Applicable standard :

5.4.6 Exciter :

- i) Type of excitation system :
- ii) Continuous capacity :
- iii) Short time capacity :
- iv) Continuous voltage :
- v) Short time voltage :
- vi) Power factor :
- vii) Frequency :
- viii) Weight of exciter excluding foundation :
- ix) Applicable standard :

5.4.7 Automatic voltage regulator :

- i) Manufacturers name and address :
- ii) Type :
- iii) Time constant :
- iv) Sensitivity :
- v) Setting provided :

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- vi) Characteristic curve for AVR to be :
furnished
- vii) Applicable standard :

5.4.8 Diesel generating set :

- i) Starting time :
- ii) Interval between starting impulses :
- iii) No. of starting impulses :
- iv) Time for picking up the load :

5.4.9 AMF panel :

5.4.9.1 Panel :

- i) Name of manufacturer :
- ii) Factory address :
- iii) Sheet steel thickness :
- iv) Method of vermin proofing and making dust proof. :
- v) Degree of protection as per IS: 2147 :
- vi) Weight (in kg) :
- vii) Outline dimensions (L x W x H) :
- viii) Type of mounting :
- ix) Cable termination details :
- x) Door with locking arrangement provided :
- xi) No. of earthing lugs provided :
- xii) Name plate details :
- xiii) Finishing and painting details :

5.4.9.2 Equipment mounted :

The complete list of flush mounted and other equipment mounted inside the control panel with quantity against each is to be furnished by the tenderer with the tender. The SLD may be enclosed.

5.4.10 Battery :

- i) Type :
- ii) Name of manufacturer :
- iii) No. of cells :
- iv) Voltage of each battery cell during -

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- a) Full charge :
- b) Floating condition :
- c) Full discharged condition :
- v) Capacity in ampere hours at 10 hours rate :
- vi) Charging current of the battery :
- vii) Rated specific gravity of electrolyte when fully charged at the room temperature of 27⁰C :
- viii) Overall dimension of each cell :
- ix) Average life in year :
- x) Applicable standard :
- xi) Output D.C. voltage.

5.4.11 Battery charger :

- i) Name of manufacturer :
- ii) Type of semi-conductor used :
- iii) Type of circuit :
- iv) Rated A.C. input voltage with percentage permissible variation. :

5.4.12 Power and control cable :

The tenderer shall furnish the detailed technical informations as enumerated hereunder, for each category of the cables separately in a tabular form.

- i) Name of the manufacturer :
- ii) Type of cable :
- iii) Reference standard :
- iv) No. of cores and nominal cross sectional area of conductor :
- v) Thickness of insulation -
 - a) Main conductor :
 - b) Neutral conductor :

5.4.13 Weight schedule :

- i) Weight of engine less fly wheel including accessories : Kg
- ii) Weight of fly wheel : Kg
- iii) Weight of generator : Kg

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- iv) Weight of exciter : Kg
- v) Weight of generator control panel : Kg
- vi) Weight of 415 switchgear cubicle : Kg
- vii) Weight of sub base : Kg
- viii) Heaviest single piece to be handled : Kg
during erection and maintenance and its
weight
- ix) Largest dimension package length x : mm x mm x mm
breadth x width

Signature :

Name :

Tenderer's seal :

Date :

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