

**TENDER FOR
SUPPLY & INSTALLATION OF DG SETS
AT
GB PANT INSTITUTE OF ENGINEERING &
TECHNOLOGY**

BID No. : 3038/Reg.off/2020
Bid Issue Date : 06 November 2020
Last Date of Submission : 25 November 2020 at 03.00 PM
Bid Opening Date : 25 November 2020 at 03.30 PM
Tender documents may be downloaded from web site www.gbpec.ac.in



**Govind Ballabh Pant Institute of Engineering
& Technology**

Ghurdauri , Pauri –Garhwal, Uttrakhand – 246194

Fax: 01368- 228062 , Website: www.gbpec.ac.in

Govind Ballabh Pant Institute of Engineering & Technology, Pauri is an Institute with total commitment to quality and excellence in academic pursuits. The Institute invites **bids in two bid system** for tenders for supply & Installation of DG SETS at GBPIET, Pauri .You are requested to quote your best offer along with the complete details of specifications, terms & conditions.

S. No.	Item Name	Brief Description
1	125 KVA DG SET	Design, Manufacture, testing at works, supply, storing/forwarding to site, unloading, handling, inspection, shifting to base, installation, testing and commissioning of 125 kVA prime rating radiator cooled diesel generating set in acoustic enclosure along with base frame, Alternator (capable of delivering true 100 kW output), Static Excitation System, Lube Oil System, Electronic Governor including Manual Control Panel, alarms, Engine Control Panel comprising of suitable rating TPN MCCB, protection relays, AVM pads, AVR Panel, 12 volt DC lead acid batteries with battery charger suitable for 3 consecutive starts and black start, day oil fuel tanks with piping upto buffer and overflow tanks, Residential grade silencer with bellows, terminal arrangements with all other associated equipment / work as per specifications. Manufacturer shall also conduct load test as per the specifications at manufacturer's site.
2	160 KVA DG SET	Design, Manufacture, testing at works, supply, storing/forwarding to site, unloading, handling, inspection, shifting to base, installation, testing and commissioning of 160 kVA prime rating radiator cooled diesel generating set in acoustic enclosure along with base frame, Alternator (capable of delivering true 128 kW output), Static Excitation System, Lube Oil System, Electronic Governor including Manual Control Panel, alarms, Engine Control Panel comprising of suitable rating TPN MCCB, protection relays, AVM pads, AVR Panel, 12 volt DC lead acid batteries with battery charger suitable for 3 consecutive starts and black start, day oil fuel tanks with piping upto buffer and overflow tanks, Residential grade silencer with bellows, terminal arrangements with all other associated equipment / work as per specifications. Manufacturer shall also conduct load test as per the specifications at manufacturer's site

(Refer Details as per Annexure – “A”)

Instructions for the Tenderer/ Contractor/ Bidders:-

1. **Bids shall be submitted at Administrative Block – Store and purchase cell, Govind Ballabh Pant Institute of Engineering & Technology, Pauri-Garhwal.**
2. **Tenderer/Contractor/Bidders are advised to follow the instructions provided in the ‘Instructions to the Contractors/Tenderer/Bidders for the submission of the bids.**
3. Bid documents may be downloaded from with Institute website www.gbpec.ac.in.

4. Tender Cost Fee:

Applicant contractor must submit the demand draft/ Cash in account section for Rs 1,500/- (Rupees One Thousand Five hundred only) + GST at 18% in favour of Director –Govind Ballabh Pant Institute of Engineering & Technology, Pauri Garhwal obtained from any Nationalized/ scheduled Bank valid for six months as a tender fees. All applicable bank charges shall be borne by the applicant and he shall not have any claim what so ever on this account on Government. The Demand Draft submitted for tender fee shall be non-refundable.

5. EMD Payment:

The bidder shall be required to submit the Earnest Money Deposit (EMD) for an amount of **Rs. 75,000/- (Rupees Seventy Five Thousand Only)** by way of F.D.R/ Demand drafts or Bank Guarantee only. The demand drafts or Bank Guarantee shall be drawn in favour of “ **Director GBPIET, Pauri Garhwal**”. The EMD of the successful bidder shall be returned after the successful submission of Bank Guarantee/ Security Deposit and for unsuccessful bidder(s) it would be returned after award of the contract.

Tenderer shall not be permitted to withdraw his offer or modify the terms and conditions thereof. In case the tenderer fail to observe and comply with stipulation made herein or backs out after quoting the rates, the aforesaid amount of earnest money will be forfeited.

- a) The Firm who are registered with MSME/ OR Small Scale Industries (SSI) are exempted to submit the EMD (Copy of registration must be provide along with technical bid)
- b) The EMD, in case of unsuccessful Bidders shall be retained by GBPIET, Pauri Garhwal till the finalization of the tender. No interest will be payable by GBPIET, Pauri- Garhwal on the EMD.

6. **The Bid documents of original instruments in respect of cost of tender document, earnest money deposit etc. must be delivered to the GBPIET, Pauri-Garhwal on or before last date/time of Bid Submission as mentioned above. The bid without tender fee and EMD will be summarily rejected.**

7. Submission of Tender:

The tender shall be submitted in two part, viz., technical bid and financial bid. All the pages of bid being submitted must be signed and sequentially numbered by the bidder irrespective of nature of

The offers submitted by Telegram/Fax/email shall not be considered. No correspondence will be entertained in this matter.

I. Technical Bid

The following documents are to be furnished by the bidder along with **Technical Bid** as per the tender document:

- a) Duly filled format of Technical Bid as per Annexure –II.
- b) Copy of constitution or legal status of the bidder manufacturer / Sole proprietorship / firm / agency etc.
- c) **Financial Status:** - The tenderer who have an average annual turnover of Rs. 1.00 crore for the last three completed financial years. The tenderer shall submit proof of the same. In case the firm is new or registered in 2020 the Financial Turnover of the Manufacturer will be considered 10 times of the Average annual turnover.
- d) **The technical bid should be accompanied by Demand draft/ Cash of Rs. 1500/-+ 18% GST (non- refundable) against tender fee and Demand Draft for an amount of Rs. 75,000/-. The F.D.R/ Demand Draft of tender fee and EMD should be prepare separately and drawn in favors of Director GBPIET, Pauri Garhwal.**
- e) Certificate of Manufacture or Authorized Distributor.
- f) Experience Certificate of the Bidder/OEM
- g) Copy of Income Tax Return/ Balance Sheet for last Three years.
- h) Copy of PAN Card.
- i) Copy of G.S.T registration certificate.
- j) Certificate as required
- k) Catalog/ brochure/Technical Data sheet
- l) Duly Signed Tender document and required documents.
- m) All other document mentioned in tender document.

II. Financial Bid

- a) Price bid Form - Price must be quoted as per format specified; failing which tender shall be summarily rejected.

General Term & Conditions

1. **Validity:** The quoted rates must be valid for a period for 180 days from the date of closing of the tender. The overall offer for the assignment and bidder(s) quoted price shall remain unchanged during the period of validity. If the bidder quoted the validity shorter than the required period, the same will be treated as unresponsive and it may be rejected.

In case the tenderer withdraws, modifies or change his offer during the validity period, bid is liable to be rejected and the earnest money deposit shall be forfeited without assigning any reason thereof. The tenderer should also be ready to extend the validity, if required, without changing any terms, conditions etc. of their original tender.

2. Technical Evaluation:

(a) Detailed technical evaluation shall be carried out by Institute pursuant to conditions in the tender document to determine the substantial responsiveness of each tender. For this clause, the substantially responsive bid is one that conforms to all the eligibility and terms and condition of the tender without any deviation. The Institute's determination of bid's responsiveness is to be based on the contents of the bid itself without recourse to extrinsic evidence. The Institute shall evaluate the technical bids also to determine whether they are complete, whether required sureties have been furnished, whether the documents have been properly signed and whether the bids are in order.

(b) **GBPIET, Pauri-Garhwal** shall have right to accept or reject any or all tenders without assigning any reasons thereof.

3. Financial Evaluation:

(a) The financial bid shall be opened of only those bidders who have been found to be technically eligible. The financial bids shall be opened in presence of representatives of technically eligible bidders, who may like to be present. The institute shall inform the date, place and time for opening of financial bid.

(b) Arithmetical errors shall be rectified on the following basis. If there is a discrepancy between the unit price and total price that is, the unit price shall prevail and the total price shall be corrected by the Institute. If there is a discrepancy between words and figures, the lesser amount shall be considered as valid. If the Supplier does not accept the correction of the errors, his bid shall be rejected.

(c) After due evaluation of the bid(s) “ **Director, GBPIET, Pauri- Garhwal** will award the contract to the lowest evaluated responsive tenderer. Conditional bid will be treated as unresponsive and will be rejected.

4. **Award of Contract:** The Institute shall consider placement of orders for jobs on those bidders whose offers have been found technical and financially acceptable. The Institute reserves the right to counter offer price(s) against price(s) quoted by any bidder.

5. **Signing of Contract:** The successful bidder shall be required to execute the Contract Agreement accepting all terms and conditions stipulated herein on a non-judicial stamp paper of Rs. 100/- (Rs. Hundred only) within fifteen days of the issue of the Letter of notification of award along with performance security. In the event of failure on the part of the successful bidder to sign the Contract within the period stipulated above, the EMD shall be forfeited and the acceptance of BID shall be considered as cancelled.

6. **Security Deposit :**The successful tenderer will be required to furnish a Security Deposit of 5% of order value in the form of Fixed Deposit Receipt or Bank Guarantee from any Nationalized Bank duly pledged in the name of the "**Director, GBPIET, Pauri-Garhwal** after receipt of supply order. If

the bidder is registered with MSME & GEM Portal both the exemption can be given for the security Deposit.

The security deposit can be forfeited by order of this Institute in the event of any breach or negligence or non-observance of any condition of contract or for unsatisfactory performance or non-observance of any condition of the contract. Security deposit will be discharged after completion of all the contractual obligations. The Security Deposit amount will not carry any interest.

7. **Demonstration:** The bidders may be asked to demonstrate the product as and when required by the Institute failing which their bids/offer shall be rejected. The firms are intimated that they should get ready for demonstration and only 15 days time will be provided for arrangement of demonstration and no request for extending time for demonstration will be entertained. Failure to demonstrate, their offer will be summarily rejected. The expenditure incurred for demonstrating the items will be borne by the supplier, no Claim in this regard will be entertained.
8. **Rate:** Prices of individual items should be inclusive of all taxes and duties including, Customs Duty, Excise Duty, etc. It should also include packing, forwarding, transport, insurance, loading/ unloading, installation etc. GST shall be extra. Rate should be quoted only in Indian Rupees (INR) on DOOR Delivery Basis at “ **Director GBPIET, Pauri-Garhwal**, Inclusive of all the Charges, with break-ups as:
 - Basic Cost.
 - GST/Other taxes.
 - Total Cost F.O.R. at “ **Director GBPIET, Pauri-Garhwal**.
9. **Manufacture authorization Certificate:** The bid must be submitted by manufacturer or authorized distributor. The bidders are required to provide manufacturer’s authorization certificate on company’s letterhead along with the technical bid (Documentary proof must submitted with technical bid).
10. **Warranty /Guarantee:**
 - (a) For the equipment The Tenderers must quote for **02 years** comprehensive on-site warranty (Including all Spares, Accessories and Labour) from the date of completion of the satisfactory installation. The warranty charges shall not be quoted separately otherwise the offer shall be summarily rejected. Failure to comply this condition will entail the rejection of the bids.
 - (b) No offer of the vendor will be accepted without warranty/ guarantee of their supplied/ installed goods.
11. **Uptime guarantee:** The firm should provide uptime guarantee of 95% of Gensets. The default during warranty period must be removed in 48 Hours or 3 Working day.
12. **Downtime penalty Clause:**
 - (a) During the comprehensive warranty period, the guarantee uptime of 95% of 365 days will be ensured. In case the down time exceeds the 5% limit penalty of extension of guaranty period by two days for each additional day of down time will be enforced. The vendor must undertake to supply all spares for optimal upkeep of the equipment for at least **THREE YEARS** (as applicable) after handling over the unit to the Institute. If accessories / other attachment of the system are procured from the third party, then the vendor must produce cost of accessory/ other attachment and the CMC from the third party separately along with the main offer and the third party will have to sign the CMC with the Institute if required.

- (b) The principals or their authorized service providers are required to submit a certificate that they have satisfactory service arrangements and fully trained staff available to support the uptime guarantee.
13. **Authority of person signing document:** A person signing the tender form or any documents forming part of the contract on behalf of another shall be deemed to warranty, that he has authority to bind such other and if, on enquiry, it appears that the person so, signing had no authority to do so, the “ **Director, GBPIET, Pauri-Garhwal** may without prejudice to other Civil and criminal remedies cancel contract and held the signatory liable for all cost and damages.
14. **Delivery and Installation:** The items shall be delivered and successful installed/ commissioned within **30 days** from the issue of supply order at “ **Director, GBPIET, Pauri- Garhwal** premises. The successful tenderer will also provide required training free of cost for supplied items at “ **Director, GBPIET, Pauri- Garhwal**. The goods should be manufactured after adoption of latest technology.

All the aspects of safe delivery, installation and commissioning shall be the exclusive responsibility of the supplier. If the supplier fails to deliver, install and commission the goods on or before the stipulated date, then a penalty at the rate of 0.5% per week of the total order value shall be levied subject to maximum of 10% of the total order value.

If at any time during the currency of the contract, the supplier encounters conditions hindering timely of the goods and performance of services, the supplier shall promptly inform the **Director, GBPIET, Pauri- Garhwal**. for extension of the delivery schedule accordingly. On receiving the supplier’s communication, **Director, GBPIET, Pauri- Garhwal** shall examine the situation as soon as possible and, at its discretion, may agree to extend the delivery schedule, with or without liquidated damages for completion of supplier’s contractual obligations by issuing an amendment to the contract.

In the case of package supply where the delayed portion of supply materially hampers installation and commissioning of the systems, liquidated damages charges shall be levied as above on the total value of the concerned package of the purchase order. Quantum of liquidated damages assessed and levied by the purchaser shall be final and not challengeable by the supplier.

15. **Right of acceptance:** The **Director GBPIET, Pauri-Garhwal** reserve the right to accepting the whole or any part or portion of the bid; and the bidder shall provide the same at the rates quoted. **The**

Director GBPIET, Pauri-Garhwal reserve the right to reject any or all tenders /quotations or all offers received in response to the tender or cancel or withdraw the tender notice without assigning any reason. Thereof and also does not bind itself to accept the lowest quotation or any tender and no claim in this regard shall be entertained.

16. Inspection:

- (a) **Director, GBPIET, Pauri- Garhwal** shall have the right to inspect and/or to test the goods to confirm their conformity to the NIT Specifications at no extra cost to the Purchaser.
 - (b) **Director, GBPIET, Pauri- Garhwal** right to inspect, test and, where necessary, reject the Goods after the goods arrival at the final destination shall in no way be limited or waived by reason of the Goods having previously been inspected, tested and passed by **Director, GBPIET, Pauri- Garhwal** prior to the goods shipment.
 - (c) The **Director, GBPIET, Pauri- Garhwal** shall be the final authority to reject full or any part of the supply which is not confirming to the specification and other terms and conditions.
 - (d) No payment shall be made for rejected Stores. Rejected items must be removed by the Bidders within two weeks of the date of rejection at their own cost and replaced immediately. In case these are not removed, these will be auctioned at the risk and responsibility of the suppliers without any further notice.
17. **Payment Term:** The Bill in triplicate may be send to this office for settlement after satisfactorily delivery & installation/ commissioning of the material. The bill should have full particulars of the items. No Payment shall be made in advance nor shall the loan from any or financial institutions be recommended on the basis of the order of award of work. The Contractor shall submit the bill only after supply & installation/ commissioning of the material to the satisfaction of the **Director, GBPIET, Pauri- Garhwal**. The case of issuing sanction and passing of bill for payment will be initiated on receipt of a pre-receipted invoice from the Contractor. No payment will be made for goods rejected.
18. **Specification:** Bids which are not meeting the bid specifications are not permitted and will be rejected.
19. **Experience:** Bidder/OEM should have at least 5 year experience in the same industry (documentary prof must upload with technical bid). Bidders who do not have the requisite experience will be rejected.
20. Performance certificate towards supply, installation of DG Sets to government institution in the past/present/future to be submitted along with technical bid, if any either by OEM/Bidder
21. Bidder is allowed to quote for only one brand for Generator & Alternator with international presence but the bidder shall be required to quote for all items.
22. One bidder can quote equipment's from more than one manufacturer, however for one item, the bidder can submit only one bid
23. **Arbitration:** If any difference arises concerning this agreement, its interpretation on payment to the made there-under, the same shall be settled out by mutual consultation and negotiation. If attempts for conciliation do not yield any result within a period of 30 days, The decision of **Director, GBPIET, Pauri- Garhwal** will be final.

24. **Breach of Terms and Conditions:** In Case of breach of any terms and conditions as mentioned above, the Competent Authority, will have the right to reject the bid at any stage without assigning any reason thereof and nothing will be payable by **Director GBPIET, Pauri-Garhwal** in that event the EMD shall also stands forfeited.
25. **Subletting of Work:** The firm shall not assign or sublet the work/job or any part of it to any other person or party without having first obtained permission in writing of **Director GBPIET, Pauri-Garhwal**, which will be at liberty to refuse if thinks fit. The tender is not transferable. Only one tender shall be submitted by one tenderer.
26. **Insolvency etc:** In the event of the firm being adjudged insolvent or having receiver appointed for it by a court or any other order under the Insolvency Act made against them or in the case of a company the passing any resolution or making of any order for winding up, whether voluntary or otherwise, or in the event of the firm failing to comply with any of the conditions herein specified **Director GBPIET, Pauri-Garhwal** shall have the power to terminate the contract without any prior notice.
27. The Purchase Committee of **Director GBPIET, Pauri-Garhwal** shall go into all aspects including cost factors of major DG Sets Equipment's and then decide for awarding of the tender, by quoting lower rates in respect of some items, a firm does not become entitled to awarding the contract in its favour of those item(s).

The committee will reject the quotations of the bidders whose quotation will not found of quality required by **Director, GBPIET, Pauri- Garhwal**, reserves the right to accept/ reject any quotation either in part or full without assigning any reason thereof, or award the contract to different supplier(s), for different item(s), if feasible after considering the credentials, manufacturing, capability, quality and distribution rights of the item(s). The firm are, therefore, requested to attach their credentials in regard to supply of items and experience in the field, distribution rights and their annual turnover.

28. The Tenderers should furnish a copy of GST registration number. Tenders not complying with this condition will be rejected.
29. GST/ Taxes if payable extra should be clearly mentioned otherwise no GST/Taxes charges will be paid.
30. The items will have to be supplied at **Director, GBPIET- Pauri-Garhwal**. No transportation/ cartage charges will be provided for the same.
31. Bidder shall submit a copy of the tender document and addendum/corrigendum thereto, if any, with each page of this document should be signed and stamped to confirm the acceptance of the entire terms & conditions as mentioned in the tender enquiry document.
32. The Institute reserves the right to accept in part or in full or reject any or more tender(s) without assigning any reasons or cancel the tendering process and reject all tender(s) at any time prior to award

of contract, without incurring any liability, whatsoever to the affected bidder or bidder(s).

33. The Director, GBPIET, Pauri-Garhwal reserve the right to accepting the whole or any part or portion of the bid; and the bidder shall provide the same at the rates quoted. The **Director, GBPIET, Pauri-Garhwal** reserve the right to reject any or all tenders /quotations or all offers received in response to the tender or cancel or withdraw the tender notice without assigning any reason thereof and also does not bind itself to accept the lowest quotation or any tender and no claim in this regard shall be entertained.

34. Applicable Law:

- The contract shall be governed by laws and procedures established by Govt. of Uttarakhand, within the framework of applicable legislation and enactment made from time to time concerning such commercial dealings/processing.
- Any disputes are subject to exclusive jurisdiction of competent court and forum in Pauri-Garhwal, India only
- The Arbitration shall be held in accordance with the provision of the Arbitration and conciliations Act, 1996 and the venue of arbitration shall be at Pauri-Garhwal. The decision of the Arbitrator shall be final and binding on the both parties.
- Force Majeure: Any delay due to Force Majeure will not be attributable to the supplier.

REGISTRAR
GBPIET, Pauri-Garhwal

Technical Specification of DG SETS

1. Technical Specification for 125 KVA DG SET

S.No.	Specs.	Unit	Data
1	Prime power Rating	kVA / kW	125/ 100
2	Current	Amps	173
3	No. of phases		3 phase
4	Power factor		0.8 (lag)
Engine specifications			
1	BHP		175
2	Cooling		Water cooling
3	Aspiration		Turbocharged-After cooled
4	No. of cylinders		6 No. in line
5	RPM		1500
6	Bore x stroke	mm.	105x 125
7	Compression ratio		15.5:1
8	Displacement	Ltrs.	6.49
9	Fuel HSD		HSD
10	Fuel consumption @ 75% Load with Radiator and Fan	(Ltr/hr	27.5
11	Governor		Electronic/ G3
12	Starting system 12 V DC Electrical		12 Volts Electrical
13	Lube oil specification		K-Oil Premium
14	Lube oil sump Capacity	Ltrs.	18 liters
15	Lube oil consumption	gmPH	20 gmPH
16	Total Coolant Capacity	Ltrs.	28 ltrs
17	Exhaust Pipe size	mm.	100
18	Battery capacity/ Rating		130 AH, 1 X 12 V DC
Alternator specifications			
1	Voltage	Volts	415V AC
2	RPM/Frequency		1500/50 Hz
3	Enclosure		IP 23
4	Voltage regulation (max.)		+/- 1%
5	Class of insulation		H Class

2. Technical Specification for 160 KVA DG SET

S.No.	Specs.	Unit	Data
1	Prime power Rating	kVA / kW	160/128
2	Current	Amps	222.6
3	No. of phases		3 phase
4	Power factor		0.8 (lag)
Engine specifications			
1	BHP		200
2	Cooling		Water cooling
3	Aspiration		Turbocharged-After cooled
4	No. of cylinders		6 No. in line
5	RPM		1500
6	Bore x stroke	mm.	105x 125
7	Compression ratio		15.5 ± 1:1
8	Displacement	Ltrs.	6.48
9	Fuel HSD		HSD
10	Fuel consumption @ 75% Load with Radiator and Fan	Ltr/hr	27.7
11	Governor		Electronic/ G3
12	Starting system 12 V DC Electrical		12 Volts Electrical
13	Lube oil specification		K-Oil Premium
14	Lube oil sump Capacity	Ltrs.	18 liters
15	Lube oil consumption	gmPH	96 gmPH
16	Total Coolant Capacity	Ltrs.	28 ltrs
17	Exhaust Pipe size	mm.	100
18	Battery capacity/ Rating		130 AH, 1 X 12 V DC
Alternator specifications			
1	Voltage	Volts	415V AC
2	RPM/Frequency		1500/50 Hz
3	Enclosure		IP 23
4	Voltage regulation (max.)		+/- 1%
5	Class of insulation		H Class

1. Supply , installation ,testing and commissioning of ready to use diesel engine alternator set in acoustic enclosure of 125/160 KVA with Manual control Panel comprising Kirloskar /Mahindra/Cummins/ Ashok Leyland/Greaves/Perkins/ EICHER/ Caterpillar or superior make diesel engine, water cooled, coupled to Kirloskar/KEL/BHEL/Crompton/ Stamford or superior make Alternator and potential free contacts and digital out facility and should have all provision for future DG automation without adding any components in the DG set and complete with control Panel, fuel tank of suitable capacity and battery with leads and anti-vibration pads and residential type silencer. The DG set shall conform to detailed specifications attached with this schedule.
2. The Engine Alternator supplied should be of ready to use type (RTU), the BHP of engine may be suitably enhanced as per site conditions in order to deliver the minimum required KVA at site, in case of water cooled engine it should be supplied with first filling of coolant and water mixture as per the manufacturer recommendation.
3. The Engine shall be equipped with governor of required accuracy and all standard fittings, flexible pipe, Engine compatible sealed maintenance free battery for starting, fixed between base frame, suitable capacity fuel tank for running the E/A set. Digital type electronic governor is not mandatory for all the ratings.
4. Connected with steel wire braided fuel pipe, silencer, MS exhaust pipe of suitable size and length as per site requirement covered with two layers of 6 mm.
5. One Layer of 12 mm thick asbestos rope, instrument panel equipped with necessary instruments, directly coupled with alternator of suitable capacity on a suitable length of common base frame, channel fixed on suitable nos.
6. AVM pads including required length of suitable size. Copper conductor unarmored XLPE cable with cable glands and lugs for inter connection between alternator and control panel, providing tools for normal maintenance and all other accessories complete as required and as per detailed specifications.
7. Operating Conditions: The engine alternator shall be capable of working at any ambient temperature between 0 Deg C to 50 Deg C with relative humidity upto 95% condition.
8. The working KVA rating at site condition after accounting for de-rating shall be obtained at 0.8power factor.
9. When there is an electrical main supply failure it will be required to work continuously for a period which may even exceed 24hour at a time.
10. The set shall be capable of taking 10% overload for a period of one hour during every 12hours.
11. Output voltage frequency and wave form : Nominal output voltage shall be 415Volt with + 1% manual adjustment at all conditions of the load. Frequency shall be 50Hz + 3% Hz in output waveform.

12. Diesel engine: Engine shall be reciprocating compression ignition engine as per manufacturer standard design and conforming to IS10001-1981& BS5514.
13. Lubrication: Lubrication shall be positive pressure type lubricating all moving parts. No moving parts shall required lubrication by hand either prior to the starting of the engine or while it is in operation. Temperature and pressure gauge shall be fitted to the lubricating system.
14. Fuel tank: Fuel tank shall be drawn out type for easy maintenance provided between base frame or separately installed in case of installation in a canopy.
15. The tank shall have level indicators marked in liters, filling inlet with removable screen, fuel out let located at minimum of 25mm above the bottom at outer face of canopy, drain plug air vent and necessary piping, hand pump for pumping the fuel into the service tank with necessary pipe or tube shall be provided.
16. The outlet of the pump shall be provided with 3-meter long reinforced hosepipe. The capacity of the tank is so as to design that there should be a capacity to fill the diesel for minimum of 8 hour continuous operation for DG set up 125/160 KVA.
17. Fuel piping: Steel wire braided pipe with hydraulically compressed benzo of superior quality shall be provided for fuel piping.
18. Silencer: Residential silencer with approved make/supplied by the engine manufacturer shall be provided. Silencer shall be supported on both ends and located as per engine manufacturer recommendations. Silencer shall be provided outside the canopy. The exhaust system of the generator must not be positioned so as to make any mark on the fence, containers or tower.
19. Speed and governing: The engine shall operate on 1500 RPM, and be able to meet site conditions with regard to Voltage, Speed, Frequency and regulation equipped with governor of required accuracy.
20. Engine start: Engine shall be cold and self-starting type. The starter battery shall have suitable copper connecting lead, sufficient to meet engine starting and control gear requirement as per manufacturer specification.
21. Battery charging: The battery charging shall be done through alternator and solid state battery charger.
22. The engine shall have following accessories: -
 - a. Heavy duties fly wheel.
 - b. Coupling with guard.
 - c. Fuel Pump suitable for lifting the fuel from fuel tank provided below E/A sets.
 - d. Governor.
 - e. Pre filters.
 - f. Fuel Filter.
 - g. Pre-filter in lift pump/button filter.
 - h. Lubricating oil filter.
 - i. Residential exhaust silencer.

- j. Electrical Starter motor
 - k. Blower fan.
 - l. Charging Alternator.
 - m. Digital electronic
 - n. Stainless steel exhaust flexible coupling
 - o. Radiator
 - p. Coolant inhibitor
 - q. Air Cleaner
 - r. All accessories included in the standard set like safeties, solenoid valve etc. shall be got from manufactures as a part of equipment.
23. Integrated control system: Microprocessor based generator set monitoring, protection and electronic governing system .The monitoring system should be designed for the genset environment, provides genset protection, engine control and displays genset parameters (both engine & alternator), eliminating use of multiple conventional controls & metering.
24. Physical construction: a. LCD alpha- numeric display b. Non metallic enclosure c. LED display- faults, warnings and generator set status Key switch for OFF/RUNS/START.
25. Governor & Speed /Frequency regulation: Integrated electronic governing (adjustable up to 5%).
26. Operator Interface: a. Manual stop/start b. Remote start/stop c. Cyclic cranking d. Alpha numeric screen e. Alternator trim adjustment f. Model specific calibration g. Field trim adjustment
27. AC Instruments: a. 3-phase AC Amps b. 3-phase AC volts c. KW d. VA e. Power factor f. Frequency
28. Measurements/Instrumentation:
- a. Lube oil pressure
 - b. Coolant temperature
 - c. Engine speed
 - d. Hours run
 - e. Battery voltage
29. Engine protection
- a. High coolant temperature (Audio-visual alarm & trip)
 - b. Low lube oil pressure (Audio-visual alarm & trip)
 - c. Fail to crank (trip)
 - d. Fail to start (trip)
 - e. Over speed (trip)
 - f. Low /High battery voltage (Audio-visual alarm)
 - g. Low coolant level shutdown(trip)
 - h. Engine shuts down due Charge alternator failure (Audio-visual alarm)
 - i. Engine shuts down due to lack of fuel (Audio-visual alarm)

30.AC protection:

- a. Over frequency (trip)
- b. Under frequency(warning)
- c. Over voltage (trip)
- d. Over current (trip)
- e. Under voltage(Audio-visual alarm)

31.Miscellaneous:

- a. Operating temperature range 0-60 °C
- b. Common fault alarm
- c. Common shutdown
- d. Date and time stamps for alarms.

32.OTHERS

- a. Vibration damper.
- b. Flywheel with housing.

33.ALTERNATOR

- a. The alternator shall be self excited, self regulated copper wound and totally enclosed for screen protected class-H insulation, designed and constructed to withstand tropical condition. Voltage regulation shall be + 1%. With digital automatic voltage regulator b. The winding shall be star connected and neutral shall be brought out to the terminal box for earth with two independent earths. The terminal of the alternator output shall be enclosed in the terminal box. The AC/ DC wiring shall be separated from each other.

34.CONTROL PANEL:

Control panel & its legs support shall be cubical type made of 16 gauge M.S. sheet with hinged type openable covers mounted on suitable channel at suitable location inside the canopy. All the control panel wiring should be easily accessible and shall have sufficient working space to make connections of cables etc. A tinned copper earth stud of adequate dimension shall be provided. Sign Writing shall be clear, good looking and to be done in factory.

35.CONTROL PANEL:

It should consist of the following.

- a. Control panel should consist of 1 no compatible MCCB having the provisions of short circuit and overload protection mechanism and the relay should be of suitable range and the relay should be of suitable range so as to make the setting of EA set full load current.
- b. Provision of release of Solenoid automatically after 30 seconds while the Engine stops due to any fault.
- c. One electrical/electronic hour counter meter installed inside panel connected from O/P of MCCB.
- d. Sets of CT's for metering of 0.5 VA burden.

- e. 1set of L.E.D. type pilot lamps with RED for set running and Green for set with load on.
- f. A set of L.E.D. pilot lamp for phase indication.
- g. 4 strips bus bar of compatible size and suitable length.
- h. Battery Charger: Automatic trickle /boost battery charger of SCR or SMPS type to charge the starting battery of DG set. This charging shall be done through main supply for which a suitable incomer shall be provided in the panel with suitable range of ammeter and voltmeter on the DC side with protective fuses.
- i. The connection of charging alternator & solid state battery charger shall be done as mentioned in detail specification.
- j. Push button for start, stop, reset, test, acknowledge located on Panel.
- k. Hooter.

36.PROOF ENCLOSURE

- a. It should be sound proof, weather proof & environment friendly, conforming to the latest environment (protection).
- b. The acoustic panels shall be fabricated in 2mm thick CRCA sheet. The finished sheet metal component shall undergo seven tank treatment process for degreasing, derusting, phosphatising etc. for longer life and should be Polly polyester based coated inside& outside. The nuts bolts and other hardware shall be Zinc coated. The door shall be provided with high quality EPDM gaskets to avoid leakage of sound. The door handles and hinges shall be Zinc plated &lockable type.
- c. Adequate ventilation shall be provided to meet the air requirement for combustion & also to expel heat to maintain temperature inside the enclosure within 5 degree Celsius above ambient at 10% overload with tripping arrangement between (50 – 60) degree Celsius.
- d. An arrangement for adequate illumination inside the enclosure shall be provided
- e. e. Separate door with locking arrangement for easy access to D.G. set during operation & maintenance should be provided.
- f. The enclosure shall be guaranteed for a period of 24 months from the date of completion of work against defective materials& rust, welding, painting, smooth functioning of doors, inspection window etc. minor civil work is to be carried out without any extra cost.
- g. Small see through window for reading meters etc. made of transparent polymer sheet of thickness not less than 10mm shall be provided.
- h. Radiator bellows to be provided in case of Water Cooled Engines.
- i. Fuel Tank and Control Panel shall be incorporated inside the canopy.

- j. Two point lifting arrangement.
- k. Main base frame of suitable size MS channel welded with suitable size thick MS sheet for bolting arrangement complete as required.
- l. Framework will be provided for floor made out of 3mm thick chequered plate i/c welding, painting etc complete around foundation as required.
- m. The canopy shall be provided with emergency stop button easily approachable from outside.
- n. The canopy shall be provided with following meters (visible from outside): -
- o. Lub. Oil pressure gauge.
- p. Water temperature gauge (for water cooled engines only). q. Dial type fuel gauge with sensing arrangement.

37. GENERAL REQUIREMENT

- a. The set shall have minimum vibration and noise under all conditions of load. The set shall be dynamically balanced. Anti vibration mounting shall be provided for supporting the set.
- b. Air filter should be easily accessible for maintenance.
- c. Coolant system shall be either Water or Oil – tropicalised radiator with engine driven blower type fan and coolant pump with low water level captor.
- c. Visual oil pressure meter for lubrication oil should be provided.
- d. Water separator fuel filter to be provided.
- e. The set shall be fitted with radio interference suppressers in case of slip ring type alternator.
- g. Control wiring shall be done with 1.5Sq.mm multi strand PVC insulated copper conductor cable.
- h. Earthing provision should be made for earthing all current carrying metal parts of the equipment. Earthlugs of suitable size shall be provided.
- i. All the exposed moving parts like coupling etc. shall be provided with suitable guards covering.
- j. All exposed metal parts shall be suitably finished to prohibit corrosion.
- l. A nameplate showing rating connection diagram should be provided on engine and

alternator. All the important and major parts should bear their catalogue number make of the parts etc. All the control wiring shall be provided with letter number ferules at both ends. Three sets of manual giving the details about design, specifications, special features of the equipment schematic and wiring diagram instructions regarding installation and maintenance etc. should be supplied. A laminated control wiring diagram should be pasted inside the control panel.

38. Control Panel with changeover switch: Control panel shall be cubical type made of Minimum 16 gauge CRCA sheet dust proof, vermin proof & powder coated Control panel, comprising of all safety and indication arrangements with hinged type open able covers mounted above base frame at suitable location and supported on both sides on base frame. All the control panel wiring should be easily accessible and shall have sufficient working space for making connections of cables etc. The change over of suitable rating and the separate indication lamp for DG/EB supply are to be included.

39. Make of Material:

- a. Change over Switches/MCCB/Contactors/Relays: L&T/GE/C&S/ABB/ Siemens/ Schenider Similar superior make
- b. Cables: Gloster/Universal/Havels/Rallison XLPE Similar Superior make

REGISTRAR
GBPIET, Pauri-Garhwal

Technical Bid format

(In Separate sealed cover-I super scribed "Technical Bid")

S. No.	Details of the Tenderer/Bidder	Remarks
1	Name and Address 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	
4	Details of the Earnest Money Deposit (EMD) (Yes/No) DD No: Dated: Drawn on Bank: Amount: (Rupees.....)	
5	Details of the cost of the Tender documents (Yes/No) DD No: Dated: Drawn on Bank: Amount: (Rupees.....)	
6	Whether each page of BID 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	
9	Permanent Account No.	
10	Certificate of Manufacture/ Authorized Distributor/ Authorized Dealer/ Authorized Sub- Dealer	
11	Copy of Income Tax Return / Balance Sheet for last Three years	
12	Catalog of quoted Make & Modal	
13	Email ID	
14	Contact No.	

Date:
Place:Name :
Business Address :
Signature of Bidder :
Seal of the Bidder :

CERTIFICATE

(To be submitted on letter head of the company/ firm)

I hereby certify that the above firm has not been ever blacklisted by any Central/State Government/Public Undertaking/Institute on any account.

I also certify that the above information is true and correct in any every respect and in any case at a later date it is found that any details provided above are incorrect, any contract given to the above firm may be summarily terminated and the firm blacklisted.

I also certify that firm will be supplied the item as per the specification given by institution and also abide all the terms & conditions stipulated in tender

Date:

Name

Place:

Business Address :

Signature of Bidder :

Seal of the Bidder:

Financial Bid

(To be submitted on letter head of the company/ firm)

S. No.	Item Description	Qty (A)	Quoted Make	Quoted Model	Rate in Rs. (for per unit) (B)	GST (C)	Amount D = (B+C)
Part A – DG SET EQUIPMENTS							
1	125 KVA	1					
2	160 KVA	1					
Total Price in Rs (in figure)							
Total Price in Rs (in Words)							

1. Part A, B & C will be evaluated on composite basis separately and in part D items will be evaluated each item separately.
2. Quantity mentioned above is tentative, it may increase or decrease as per site requirement.
3. I/We have gone through the terms & conditions as stipulated in the tender enquiry document and confirm to accept and abide the same.
4. The contractor shall take into account all the costs involved in compliance of all the conditions, installation and required accessories as stated above while quoting his rates intender.
5. No other charges would be payable by the Institute.

Date:

Name :

Place:

Business Address :

Signature of Bidder :

Seal of the Bidder :

: