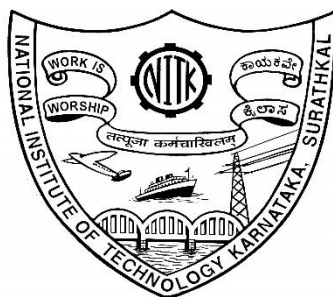


NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA, SURATHKAL

CENTRAL RESEARCH FACILITY
POST SRINIVASNAGAR, MANGALURU – 575 025 (D K)

Phone: (0824) 2474000.
E- mail: info@nitk.ac.in

Fax: (0824) 2474033
Website: <http://www.nitk.ac.in>



TENDER DOCUMENT

Tender Notification No: NITK/CRF/3PH-GEN/04

Date: 09/07/2019

Name of Goods	: 500 KVA 3 Phase Diesel Generator with AMF Panel
Estimated amount put to Tender	: Rs. 48,00,000/- (Rs. 48 Lakhs)
EMD Amount (2% of estimated amount)	: Rs. 96,000/- (Rs. Ninety-six thousand)
Time for Supply of item	: Four months after release of Purchase order
Date & Venue of Pre-Bid Conference	: On 30/07/2019 at 3.00pm Board Room, NITK
Last Date and Time for submission of tender	: 07/08/2019, before 3.00PM
Address for Submission of Tender	: Dr. Udaya Bhat k Chairman, Central Research Facility NITK, Surathkal- 575025. Mobile: +91 9480055475 E-mail: office.crf@nitk.edu.in / re.electrical@nitk.edu.in
Purchase officer Name and Contact (Related to purchase inquiry)	: Pritam Bansod Ramesh, Assistant Registrar (Purchase) Phone: +91-824-2473993, Email: pritamansod@nitk.ac.in
Date of opening of technical bid	: 14/08/2019, 3.30PM Board Room, Main Building, NITK Surathkal



NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA, SURATHKAL

Central Research Facility

POST SRINIVASNAGAR, MANGALURU – 575 025

Phone: (0824) 2474000

Fax: (0824) 2474033

E- mail: info@nitk.ac.in

Website: <http://www.nitk.ac.in>

Tender Notification No: NITK/CRF/3PH-GEN /04

Date: 09/07/2019

NOTICE INVITING TENDER (NIT)

The National Institute of Technology Karnataka, Surathkal (in short – NITK, Surathkal) is an autonomous institute under Ministry of HRD Govt of India imparting Technical Education and engaged in Research Activities. It is proposed to procure equipment for Central Research Facility.

Sealed Tenders are invited for the following items in **two cover system** (i.e., Technical bid and financial bid) subject to the following terms and conditions, from the reputed manufacturers or it's authorized dealers so as to reach this office on or before scheduled date and time. The tender (Technical bid) will be opened on the same day if possible in the presence of bidders or their authorized agents who may choose to be present. The financial bid of only such bidders whose technical bid is accepted shall be opened on the same day or later pre-informed date.

- 1. Name of Goods** : 500 KVA 3 Phase Diesel Generator with AMF Panel
- 2. Estimated Cost** : Rs. 48,00,000/- (Rs. 48 Lakhs)
- 3. E M D (2% of estimated amount)** : Rs. 96,000/- (Rs. Ninety-six thousand)
- 4. Time for completion of Supply after Placing Purchase Order** : 4 months
- 5. Date & Venue of Pre-Bid Conference** : **On 30/07/2019 at 3.00pm Board Room, NITK**
- 6. Last date and time for submission of Tender** : **07/08/2019, before 3.00PM**
- 7. Tender to be submitted at the following address** : Dr. Udaya Bhat k
Chairman, Central Research Facility
NITK, Surathkal- 575025.
Mobile: +91 9480055475
E-mail: office.crf@nitk.edu.in / re.electrical@nitk.edu.in
- 8. Place, Date and Time of opening technical bid** : **14/08/2019, 3.30PM,**
Board Room, Main Building, NITK Surathkal

Note: Institute shall not be responsible for any postal delay about non-receipt /non-delivery of the bids or due to the the wrongaddressee.

Sd/-
Chairman, CRF



NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA, SURATHKAL

Central Research Facility

POST SRINIVASNAGAR, MANGALURU – 575 025

Phone: (0824) 2474000

Fax: (0824) 2474033

E- mail: info@nitk.ac.in

Website: <http://www.nitk.ac.in>

Tender Notification No: NITK/CRF/3PH-GEN /04

Date: 09/07/2019

The calendar of events of e-Tender

1. Date for viewing the tender document in website : 09/07/2019 onwards
2. Date & Venue of Pre-Bid Conference : On 30/07/2019 at 3.00pm Board Room, NITK
3. Start date for submission of tender document : 01/08/2019
4. Last Date and Time for submission of tender : 07/08/2019, before 3.00PM
5. Date of opening of technical bid : 14/08/2019, 3.30PM
Board Room, Main Building, NITK Surathkal

SECTION 1: INSTRUCTION TO BIDDER (ITB)

1. **The bid should be submitted in two cover system (sealed)-Technical Bid and Financial Bid**
2. **Technical Bid:** Documents related to the **Technical Bid** should be submitted in sealed envelope and duly superscribed as “**Envelope No. 1 – Technical Bid**”. Full name and address of the bidder should be mentioned on the envelope and should be addressed to The Director, NITK, Surathkal
3. **The Technical Bid should contain the following documents:**
 - a) Minimum bidder eligibility criteria for qualifying technical bid as per **Annexure- ‘I’**
 - b) Compliance statement of specifications as per **Annexure - ‘A’**.
 - c) License certificate for manufacture /supply of the item & Factory license
 - d) Agreements/Purchase Orders/Completion certificates if any, for similar items to other Universities, Institutes, and Government Department/Undertakings/Public sectors the details of such supplies for the preceding three years should be given together with the prices eventually or finally paid with contact details of persons as per **Annexure –‘B’**.
 - e) List of Owner/partners of the firm and their contact numbers (Bidder Information)
 - f) Declaration of abandoned or suspended any awarded service & Blacklist Certificate. **Annexure ‘C’**
 - g) Integrity Pact (for procurements above Rs1.0 Crore (Rs10.0 Million). **Annexure ‘D’**
 - h) Copy of GST certificate & PAN No.
 - i) Catalog of the Product with detailed product specifications.
 - j) Undertaking that the successful BIDDER agrees to give a Performance Security amounting to 10%of the purchase order value in favor of “The Director, NITK Surathkal”.
 - k) The copy of the Balance sheet, Profit & Loss A/c., Trade or Manufacturing A/c for the last 3 years should be enclosed and the turnover must be 30% of the estimated cost.
 - l) Duly filled in checklist should be submitted along with the Technical Bid.
 - m) Contract form given in Section 5 need to be submitted.
 - n) **EMD must be** in the form of Bank Guarantee (**ANNEXURE –G**)/Fixed Deposit Receipt/ Demand Draft. It will be valid for **180 days** from the date of opening of the tender. The firm registered with MSME/NSIC as per MSME procurement policy order 2012 will be exempted from submission of EMD. Intended parties will have to give proof of registration along with their tender. EMD of the unsuccessful bidders shall be refunded without any interest at the earliest after finalization of the purchase of the concerned item.
 - i) The EMD will be returned to the BIDDERS(s) whose offer is not accepted by NITK within one

month from the date of the placing of the purchase order(s) on the selected BIDDER(s). In case of the BIDDER(s) whose offer is accepted the EMD will be returned on submission of Performance Security in the form of Bank Guarantee (BG). However, if the return of EMD is delayed for any reason, no interest/penalty shall be payable to the BIDDERS.

- ii) The successful BIDDER, on the award of contract/order, must send the contract/order acceptance in writing, within 15 days of award of contract/order failing which the EMD will be forfeited.
- iii) The EMD shall be forfeited in case a successful BIDDER fails to furnish the Performance Security.

4. Financial bid : The bidders should submit their financial bid as per the format given in Section 4 of the Notice Inviting Tender in the sealed envelope. This envelope should be duly superscribed as “**Envelope No. 2 – Financial bid**”. Full name and address of the bidder should also be mentioned on the envelope and should be addressed to The Director, NITK, Surathkal

After evaluation of technical bid, the technically successful bidders shall be intimated to witness the opening of their financial bid along with date, time and venue through e-mail. Financial bid of only those bidders' will be opened who are declared “Technically Successful or Technically Responsive”.

Note that both the sealed envelopes, No. 1 and 2, should be submitted in a single sealed envelope duly superscribed with the following details.

(i) Tender Notification Number (ii) “Tender for the supply of.....” (iii) Not to Open before (Date and Time)

Mention “Kind Attention: Contact Person’s Name and Phone Number”, and submit at the address given in the Notice Inviting Tender.

5. Bid Evaluation:

On the due date, the Technical bids will be opened and referred to the Purchase Committee which is duly constituted by the Director, NITK. The committee will go through the technical aspects of the tender and recommend shortlisted firms. The recommendation of the committee is final and binding on all the parties. The committee may visit the manufacturing site to assess the capabilities to manufacture the tendered items as per the specifications. In case of any remarks/default noted, the EMD will be forfeited even if pre-qualified.

6. Quoting of Price(s):

- a. Indian bidder should quote firm prices in Indian rupee only unless otherwise specified elsewhere in this tender. Prices quoted in any other currency shall not be considered.

- b. In case of Global Tender, Price quoted should be in Indian Rupees/US Dollar/Euro/Pound Sterling/Yen or in a currency under Reserve Bank of India's notified basket of currencies and must include delivery at NITK, Surathkal including loading/unloading.
- c. For the purpose of price evaluation, if the bid is submitted in Foreign Currency, then the bid price shall be converted to Indian Rupees as per the RBI Exchange Rate prevailing on the day of opening of the price bid.
7. The Bid will be accepted only from the manufacturers (OEM) or its authorized supplier.
8. The incomplete or conditional tender will be rejected.
9. The Institute reserves the right to cancel at any time after acceptance of the tender with a notice. The Supplier shall have no claim to any payment of compensation or otherwise whatsoever, on account of any profit or advantage which might have derived from the execution of the supply.
- 10. Performance Security** The successful bidder shall deposit a performance security of 10% of the quoted price in the form of Bank Guarantee (**ANNEXURE -G**)/Demand Draft/Fixed Deposit Receipt of any scheduled bank drawn in favour of **The Director, NITK Surathkal, Mangaluru** payable at Mangaluru. In case the bidder fails to deposit the said performance Security within the stipulated period, including the extended period if any, the Earnest Money Deposited by the bidder shall be forfeited automatically without any notice. Please note the following points:
- a) Successful bidder should submit performance Security as prescribed above to the purchase Section, NITK Surathkal, on or before 30 days from the date of issue of order acknowledgment.
- b) Performance Security shall be for the due and faithful performance of the contract and shall remain binding, notwithstanding such variations, alterations for extensions of time as may be made, given, conceded or agreed to between the successful bidder and the purchaser under the terms and conditions of acceptance to tender.
- c) The successful bidder is entirely responsible for the due performance of the contract in all respects according to the terms and conditions of the tender.
- d) The validity of the Performance Security must cover the warranty period plus two months.
- e) In case of imported goods, the Indian agent has to furnish Performance Bank Guarantee in Indian Rupees only from Scheduled Bank.
- 11. The validity of bids:** The rate quoted should be valid for a minimum of 180 days. No claim for escalation of the rate will be considered after opening the Tender.
- 12. Warranty/Guarantee & On-site skill support:** On-site comprehensive warranty will be effective from the date of successful installation and commissioning. The OEMs/Authorized Distributors and Dealers must attach a certificate of sales and service facilities, escalation support for on-call service or station engineer etc.

13. Imports: In case, equipment is to be imported, the Indian agent should furnish authorization certificate by the principles abroad for submission of the bid in response to this Notice Inviting Tender.

14. Clarification of Tender Document: Through pre-bid conference (Section 1, Point No. 35).

15. Amendment of Tender document: At any time prior to the last date for receipt of bids, Institute may for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, modify the Tender document by an amendment. Further, Institute may at its own discretion extend the last date for the receipt of bids.

16. The bids shall be written in English language and any information printed in another language shall be accompanied by an English translation, in which case for the purpose of interpretation of the bid, the English translation shall govern.

17. The Institute reserves the right of accepting any bid other than the lowest or even rejecting all the bids. The decision of the Purchase Committee is final in all matters of tender and purchase.

18. Cancellation of Tender: Notwithstanding anything specified in this tender document, NITK Surathkal in its sole discretion, unconditionally and without having to assign any reasons, reserves the rights:

- a) To accept OR reject lowest tender or any other tender or all the tenders.
- b) To accept any tender in full or in part.
- c) To reject the tender offer not conforming to the terms of the tender.
- d) To give purchase preference to Public Sector undertakings when applicable as per Govt. Policy/ Guidelines.

19. Delivery Period: The Delivery Period/Time shall be deemed to be the essence of the Contract and delivery must be completed not later than such date(s). If the Supplier does not perform its obligations within the Delivery Period/Date mentioned in the Contract, the same would constitute the breach of the Contract and the Institute shall have the right to cancel or withdraw the Contract for the unsupplied portion after the expiry of the original or extended delivery date or period stipulated in the Contract. Such cancellation of contract on account of non-performance by the Supplier would entitle the Buyer to forfeit the EMD / Performance Security besides other actions such as debarment from the Institute as per GFR 2017.

20. Liquidated Damages: Timely delivery is the essence of contract and hence if the Supplier fails to deliver Goods within the original/extended delivery period(s) specified in the contract, the Institute will be entitled to deduct/recover the Liquidated Damages for the delay, unless covered under Force Majeure conditions aforesaid, **@ 1% per week or part of the week of delayed period** as pre-estimated damages not exceeding 5% of the contract value without any controversy/dispute of any sort whatsoever.

21. Terms of Payment:

- a. Payment within 30 days from the date of delivery and Acceptance Certificate of concerned Department/Section/Purchase Section.

- b. Payment shall be made by Cheque or such other mode/electronic fund transfer offered by the Bank. NITK, Surathkal will not pay advance payment to party. Any request for Advance payment will be rejected summarily. In case if it is necessary, the advance payment will be paid strictly against Bank Guarantee only.
 - c. Payment will be made by Standard Payment terms and conditions of NITK, Surathkal as per tender document only. Any request for a change in payment terms and conditions will not be accepted.
 - d. If the above conditions are not acceptable then tender will be rejected.
22. Bidders are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their bid as to the nature of the installation site, the means of access to the site and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their tender. A bidder shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charges consequent on any misunderstanding or otherwise shall be allowed. Submission of a bid by a bidder implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the installation to be done and local conditions and other factors having a bearing on the execution of the bid.
23. If there are varying or conflicting provisions made in any one document forming part of the contract, the Accepting Authority shall be the deciding authority with regard to the intention of the document and his decision shall be final and binding on the bidder.
24. The rate quoted by the bidder **shall be firm throughout the contract** period and there shall be no revision of the rates for any reasons whatsoever. It should be clearly understood that any claim for changes will not be entertained in any case once the bids are opened.
25. **One bid per bidder:** Each bidder shall submit only one bid either by himself or by representing a firm.
26. **Cost of bid:** The bidder shall bear all costs associated with the preparation and submission of his bid. The Institute in no case shall be responsible or liable for those costs.
27. The bidder shall not make or cause for any alteration, erasure or obliteration to the text of the tender document.
28. The Institute will declare a bidder ineligible, either indefinitely or for a specified period of time, at the sole discretion of the Institute, for the award of contract/ participating in any other tender, if at any time the Institute determines that he has furnished false information/ engaged in corrupt or fraudulent practices.
29. If any overpayment is detected as a result of the post-payment audit, it shall be recovered by the Institute from the Supplier out of his Performance Security.
30. **Determination of successful bidder:** The technically qualified bidder whose offer is evaluated as the **lowest total bid** shall be the successful bidder subject to its meeting the statutory requirements.
31. **Price variation:** The rate quoted by the bidder shall be firm throughout the contract period. No price variation clause is applicable to this contract.

32. CANVASSING:

- a) Canvassing in connection with tenders is strictly prohibited and the Tenders submitted by the Tenderers who resort to canvassing shall be liable to rejection.
- b) Subject to the provisions concerning clarification of Bids, no Bidder shall contact the purchase committee on any matter relating to its bid from the time of the bid opening up to the time that the contract is awarded.
- c) Any effort by the Bidder or Bidder's representative however described to influence the purchase committee in any way concerning scrutiny, consideration, evaluation of the Bid(s) or decision concerning award of contract shall entail rejection of Bid and action against the bidder as deemed fit.
- d) The purchase committee will deal with the Bidder on a Principal basis, without involvement in any manner in India or abroad of any agent or consultant or associate or other person howsoever described.

33. LATE BIDS:

- a) Any bid received on or before specified time and date (including any extension(s) thereof) will be accepted and late submission of the bids will be declared as "Late" and shall be rejected.
- b) Unopened "Late Bid" shall be returned to the bidder in due course.

34. Legal Matter: All Domestic and International disputes are subject to Mangaluru Jurisdiction only.

35. Pre-Bid Conference:

- a) All prospective bidders are requested to kindly submit their queries through E-mail to re.electrical@nitk.edu.in and cc to office.crf@nitk.edu.in , so as to reach the buyer, **on or before 22/07/2019 before 4.00pm.**
- b) A Pre-bid Conference shall be held as indicated in Invitation to Bid. All prospective bidders are requested to kindly attend the Pre-bid Conference. In order to facilitate NITK for the proper conduct of the Pre-bid Conference, all prospective bidders are requested to kindly submit their queries through E-mail to the indicated mail address (with Tender No. and Date) so as to reach the Buyer as indicated in Invitation to Bid.
- c) NITK shall answer the queries during the pre-bid conference, which would become a part of the proceedings of the Pre-bid Conference. These proceedings will, in turn, become a part of clarifications/amendments to the bidding documents and would become binding on all the prospective bidders. These proceedings would also be hosted on NITK website www.nitk.ac.in for the benefit of all prospective bidders. Before formulating and submitting their bids, all prospective bidders are advised to surf through the NITK website after the Pre-bid Conference, in order to enable them to take cognizance of the changes made in the bidding document.
- d) Any Statement made at the pre-bid conference shall not modify the terms of the bidding documents unless such statement is made part of clarification in the proceeding of Pre-Bid Conference

SECTION 2: CONDITIONS OF CONTRACT.

1. The rate quoted should be FOR NITK, Surathkal for Indian supplier.
2. In case of import, CIF rates should be quoted. All components of expenditure to arrive by air at Bangalore need to be explicitly specified. If shipped by sea, the nearest seaport is Mangaluru/Chennai. In both cases, the item should be landed at NITK Surathkal and this responsibility is with the bidder.
3. The institute is eligible for customs duty/GST exemption.
4. The rate quoted should be on per unit basis. Taxes and other charges should be quoted separately, considering exemptions, if any.
5. Rate quoted should be inclusive of Testing, Commissioning and Installation of Equipment and Training.
6. **Payment:** No advance payment will be made. Payment will be made only after the completion of work and satisfactory condition and receipt of performance security by the supplier.

Completion of work means: supply, Installation and commissioning of 500 kVA DG, AMF panel and all other accessories along with necessary approvals from the competent authorities (i.e. CPCB/State Pollution Control Board/Local Bodies/Central Electricity Authority (CEA)/other Licensing Authorities, wherever required)

In case of Imports, the payment will be made through LC. Performance security needs to be submitted at the time of LC commitment.

7. Guarantee and Warranty period should be specified for the complete period conforming to the Section 3 of this tender document.
8. The period required for the supply and installation of Equipment should be specified conforming to the Section 3 of this tender document.

SECTION 3: SCHEDULE OF REQUIREMENTS, SPECIFICATIONS AND ALLIED DETAILS

[To be filled up by the Department / Center of NITK, Surathkal]

Item(s) Name to be Procured	: 500 KVA 3 Phase Diesel Generator with AMF Panel
Type (Equipment/Software/Furniture/Others)	: Equipment
Brief Specifications of the Item(s) (Attach Additional Sheet if necessary)	: Please find in Annexure-H
Quantity	: 01
Any other details/requirement	: Please refer to Annexure-H
Warranty Period (in months)	: 24 months (2 years)
Comprehensive AMC after warranty period	: 3 years
Delivery Schedule expected after release of Purchase order (in Weeks)	: 16 weeks (4 months)
EMD (2% of the estimated amount)	: Rs. 96,000/-
Performance Security to be given by Successful Bidder after release of Purchase Order (in Rupees)	: 10% of Purchase Order



NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA, SURATHKAL

SECTION 4 - PRICE BID (for indigenous Supplies)

[To be used by the bidder for submission of the bid]

Reference Number:

Date:

Sl. No.	Description of the Item and Specification	Qty. in Units	Unit Price (Rs.)	Discount %	Excise/Customs Duty %	GST (%)	Other charges if any (please specify details)	Total Price (Rs.)

1. Delivery Mode: Delivery at NITK Surathkal, at the site only.

Total Bid Price in the above column should be inclusive of all taxes and levies transport, loading, unloading etc.

Delivery Period:..... days.

Validity Date: Minimum 180 days from the date of submission of quotation/ tender.

2. Payment Term: Payment within 30 days from the date submission of bill Acceptance Certificate to concerned Dept./ Sect.

3. a) AMC Charges after warranty period :

b) Comprehensive AMC charges after warranty period :

Price Bids will be compared considering 3 a) or b). NITK reserves the right to consider 3 a) or 3 b) for price comparison.

PAN No. :

GST Registration No. :

Seal and Signature:.....

Name & Business Address:.....

Note: Price Bid should be submitted in given format only. For additional information/extra items above format may be typed and used.

Place:

Date:



NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA, SURATHKAL

SECTION 4 - PRICE BID (for Imported Supplies)

[To be used by the bidder for submission of the bid]

Reference Number:

Date:

Sl. No.	Description of Items & Specifications	HSN/SAC Code	Quantity in Units	IGST %	Price basis(CIF)	Total Bid Price
	Installation and Commissioning Charges (if any, quote in INR)					
	Agency Commission (if any quote in %)					
	Other Charges (please specify details)					
Grand Total						

HSN Code: Harmonised System of Nomenclature Code no. and # SAC Code: Service Accounting Code no.

1. Delivery Period: days.
2. Validity Date: Minimum 180 days from the date of submission of quotation/ tender.
3. a) AMC Charges after warranty period _____ :
b) Comprehensive AMC charges after warranty period:
Price Bids will be compared considering 3 a) or b). NITK reserves the right to consider 3 a) or 3 b) for price comparison.

1. Validity of the bid: 180 days from the date of submission of the quotation or tender.

2. Mode of Shipment: _____

3. Port of Shipment: _____

Place:

Date:

Signature and Seal of the Bidder

SECTION 5: CONTRACT FORM

[To be provided by the bidder in the business letter head]

1. (Name of the Supplier's Firm) hereby abide to deliver by the delivery schedule mentioned in section 3 tender document for supply of the items if the purchase order is awarded.
2. The item will be supplied conforming to the specifications stated in the tender document without any defect and deviations.
3. Warranty will be given for the period mentioned in the tender document and service will be rendered to the satisfaction of NITK, Surathkal during this period.

Signature of the Bidder: _____

Name and Designation: _____

Business Address : _____

Place:
Date:

Seal of the Bidder's Firm

Previous Supply Orders Executed

Name of the firm: _____

Order placed by [Full address of the purchaser]	Order No. and Date	Order Value	Specified Delivery Date	Actual Delivery Date	Remarks indicating reasons for late delivery, if any and justification for the price difference of their supply order and those quoted to us	Has the equipment been installed satisfactorily?	Contact person along with telephone, mobile number, fax, and E-mail address

Signature and Seal of the Bidder

FORMAT OF DECLARATION
(To be submitted on Letterhead)

I/We Mr./Ms. _____, S/o/ of Mr. _____ aged about _____ years, resident of _____
, working as -----(designation) for ----- (name and address of the bidding agency).

I solemnly affirm and state as under:

1. That I am working as ----- /proprietor of the ----- (name of the firm) and authorized to sign this declaration.
2. That the firm M/s---- (complete address of the firm) has not abandoned or suspended any contract work of any organization/ department so far/ during the previous five financial years.
3. That the firm M/s---- (complete address of the firm) has not been blacklisted/ debarred for competing in tenders by any organization/ department so far/ during the previous five financial years.
4. I solemnly confirm that the facts stated above are true and nothing has been concealed.

Seal and Signature of Bidder

INTEGRITY PACT AGREEMENT

(To be signed by the bidder/same signatory authorized to sign the relevant contact)

This Integrity Agreement is made at Surathkal on this day of20

BETWEEN

National Institute of Technology Karnataka, Surathkal, an Institute of National Importance (under NIT Act -2007) represented through The Registrar, NITK, Surathkal (hereinafter referred as the '**Buyer**', which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

AND

.....
(Name and Address of the Individual/firm/Company)

Through (Hereinafter referred to as the "Bidder/Contractor" and which expression shall unless repugnant to the meaning or context hereof include its succession and permitted assigns)

Preamble

WHEREAS **NITK Surathkal has** floated the Tender (Tender No NITK/CRF/3PH-GE/04 dated 09/07/2019) (Hereinafter referred to as "Tender/Bid") and intends to award, under laid down organizational procedure, contract for "500 KVA 3 Phase Diesel Generator with AMF Panel"

[Hereinafter referred to as the "**Contract**").

AND WHEREAS the Principal/Owner values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness/transparency in its relation with its Bidder(s) and Contractor(s).

AND WHEREAS to meet the purpose aforesaid both the parties have agreed to enter into this Integrity Agreement (hereinafter referred to as "**Integrity Pact**" or "**Pact**"), the terms and conditions of which shall also be read as integral part and parcel of the Tender/Bid documents and Contract between the parties.

NOW, THEREFORE, in consideration of mutual covenants contained in this Pact, the parties hereby agree as follows and this witness as under:

Seal and Signature of the bidder

Registrar, for NITK Surathkal

Article 1: Commitment of NITK Surathkal

- i. **NITK Surathkal** commits to take all measures necessary to prevent corruption and to observe the following principles:
 - (a) No employee of NITK Surathkal, personally or through any of his/her family members, will in connection with the Tender, or the execution of the Contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
 - (b) NITK Surathkal will, during the Tender process, treat all Bidder(s) with equity and reason. NITK Surathkal will, in particular, before and during the Tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential/additional information through which the Bidder(s) could obtain an advantage in relation to the Tender process or the Contract execution.
 - (c) NITK Surathkal shall endeavour to exclude from the Tender process any person, whose conduct in the past has been of biased nature.
- ii. If NITK Surathkal obtains information on the conduct of any of its employee which is a criminal offence under the Indian Penal code (IPC)/Prevention of Corruption Act, 1988 (PC Act) or is in violation of the principles herein mentioned or if there be a substantive suspicion in this regard, NITK Surathkal will inform the Chief Vigilance Officer and in addition can also initiate disciplinary actions as per its internal laid down policies and procedures.

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

- 1) It is required that each Bidder/Contractor (including their respective officers, employees and agents) adheres to the highest ethical standers, and report to the Government / Department all suspected acts of **fraud or corruption or Coercion or Collusion** of which it has knowledge or becomes aware, during the tendering process and through the negotiation or award of a contract.
- 2) The Bidder(s)/Contractor(s) commit himself to take measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the Tender process and during the Contact execution:
 - a. The Bidder(s)/Contractor(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal/Owner's employees involved in the Tender process or execution of the Contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the Tender process or during the execution of the Contractor.

Seal and Signature of the bidder

Registrar, for NITK Surathkal

- b. The Bidder(s)/Contractor(s) will not enter with other Bidder(s) into an undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to cartelize in the bidding process.
 - c. The Bidder(s)/Contractor(s) will not commit any offense under the relevant IPC/PC Act. Further the Bidder(s)/Contractor(s) will not use improperly, (for the purpose of competition or personal gain), or pass on to others, any information or documents provided by the Principal/Owner as
 - d. part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
 - e. The Bidder(s)/Contractor(s) of foreign origin shall disclose the names and address of agents/representatives in India if any. Similarly, Bidder(s)/Contractor(s) of Indian Nationality shall disclose names and address of foreign agents/representatives if any. Either the Indian agent on behalf of the foreign principals or the foreign principal directly could bid in a tender but not both. Further, in cases where an agent participates in a tender on behalf of one manufacturer, he shall not be allowed to quote on behalf of another manufacturer along with the first manufacturer in a subsequent/parallel tender for the same item.
 - f. The Bidder(s)/Contractor(s) will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the Contract.
- iii. The Bidder(s)/Contractor(s) will not instigate third persons to commit offenses outlined above or be an accessory to such offenses.
 - iv. The Bidder(s)/Contractor(s) will not, directly or through any other person or firm indulge in fraudulent practice **means a wilful misrepresentation or omission of facts or submission of fake/forged documents in order to induce public official to act in reliance thereof, with the purpose of obtaining unjust advantage by or causing damage to justified interest of others and/or to influence the procurement process to the detriment of the Government interests.**
 - v. The Bidder(s)/Contractor(s) will not, directly or through any other person or firm use Coercive practices (means the act of obtaining something, compelling an action or influencing a decision through intimidation, there or the use of force directly or indirectly, where potential or actual injury may befall upon a person, his/her reputation or property to influence their participation in the tendering process).

Seal and Signature of the bidder

Registrar, for NITK Surathkal

Article 3: Consequences of Breach

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

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

Article 4: Previous Transgression

- 1) The Bidder declares that no previous transgressions occurred in the last 5 years with any other Company in any country conforming to the anticorruption approach or with Central Government or State Government or any other Central/State Public Enterprises in India that could justify his exclusion from the Tender process.

Seal and Signature of the bidder

Registrar, for NITK Surathkal

- 2) If the Bidder makes an incorrect statement on this subject, he can be disqualified from the Tender process or action can be taken for banning of business dealings/ holiday listing of the Bidder/Contractor as deemed fit by the Principal/Owner.
- 3) If the Bidder/Contractor can prove that he has resorted/recouped the damage caused by him and has installed a suitable corruption prevention system, the Principal/Owner may, at its own discretion, revoke the exclusion prematurely.

Article: 5 Equal Treatment of all Bidder/Contractors/Subcontractors

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

Article 6: Duration of the Pact

This Pact begins when both the parties have legally signed it. It expires for the Contractor/Vendor 12 months after the completion of work under the contractor or till the continuation of defect liability period, whichever is more and for all other bidders, till the Contract has been awarded.

If any claim is made/lodged during the time, the same shall be binding and continue to be valid despite the lapse of this pacts as specified above, under it is discharged/determined by the Competent Authority of NITK, Surathkal.

Article 7: Other Provisions

- 1) This Pact is subject to Indian Law, place of performance and jurisdiction is **Mangaluru**, the Headquarters of NITK Surathkal, who has floated the Tender.
- 2) Changes and supplements need to be made in writing. Side agreements have not been made.

Seal and Signature of the bidder

Registrar, for NITK Surathkal

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

Article 8: LEGAL AND PRIOR RIGHTS

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

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

.....

(For and on behalf of NITK Surathkal)

(For and on behalf of bidder/ contractor)

WITNESSES:

1.
 (Signature, name, and address)

2.
 (Signature, name, and address)

Place: Surathkal.

Dated:

Format for Bank Account details of the bidder

Name of the account holder (bidder)	
Complete address	
Contact number	
Email address	

Bank Account details:

Bank name	
Branch name	
MICR number	
Account type	
Account Number	
Please re-type Account number again	
IFSC code of the Bank	

I hereby declare that the particulars given above are correct and complete. If the transaction is delayed or not effected at all for reasons of incomplete or incorrect information, I would not hold the Institute responsible for this.

I have read the option invitation letter and agree to discharge responsibility expected of me as a participant under the scheme.

Seal and signature of the bidder.

Certification from the banker:

Certified that the particulars furnished above are correct as per our records.

Seal and signature of the authorized officer of the bank.

FORMAT FOR PERFORMANCE GUARANTEE BOND

(To be typed on Non-judicial stamp paper of the value of Indian Rupees of One Hundred) (TO BE ESTABLISHED THROUGH ANY OF THE NATIONAL BANKS (WHETHER SITUATED AT MANGALURU OR OUTSTATION) WITH A CLAUSE TO ENFORCE THE SAME ON THEIR LOCAL BRANCH AT MANGALURU OR ANY SCHEDULED BANK (OTHER THAN NATIONALISED BANK) SITUATED AT MANGALURU. BONDS ISSUED BY CO-OPERATIVE BANKS ARE NOT ACCEPTED.)

To,
Registrar,
National Institute of Technology Karnataka,
Srinivasnagar P.O., Surathkal
Mangaluru – 575025

LETTER OF GUARANTEE

WHEREAS National Institute of Technology Karnataka (Buyer) have invited Tenders vide Tender No..... Dt. for purchase of AND WHEREAS the said tender document requires that any eligible successful tenderer (seller) wishing to supply the equipment / machinery, etc. in response thereto shall establish an irrevocable Performance Guarantee Bond in favour of **“The Registrar, National Institute of Technology Karnataka, Surathkal”** in the form of Bank Guarantee for Rs **(10% (ten percent) of the purchase value)** and valid till **one year or upto warranty period whichever is later** from the date of issue of Performance Guarantee Bond may be submitted within 30 (Thirty) days from the date of Order Acknowledgement as a successful bidder.

NOW THIS BANK HEREBY GUARANTEES that in the event of the said tenderer (seller) failing to abide by any of the conditions referred in tender document/purchase order/performance of the equipment/machinery, etc. this Bank shall pay to National Institute of Technology Karnataka, Surathkal on demand and without protest or demur Rs (Rupees.....). This Bank further agrees that the decision of National Institute of Technology Karnataka, Surathkal (Buyer) as to whether the said Tenderer (Seller) has committed a breach of any of the conditions referred intender document/purchase order shall be final and binding.

We, (name of the Bank & branch) hereby further agree that the Guarantee herein contained shall not be affected by any change in the constitution of the Tenderer (Seller) and/ or National Institute of Technology Karnataka, Surathkal (Buyer).

Notwithstanding anything contained herein:

1. Our liability under this Bank Guarantee shall not exceed Rs. (Indian Rupees only).
2. This Bank Guarantee shall be valid up to(date) and
3. We are liable to pay the guaranteed amount or any part thereof under this bank guarantee only and only if National Institute of Technology Karnataka (NITK) Surathkal serve upon us awritten claim or demand on or before(date). This Bank further agrees that the claims if any, against this Bank Guarantee, shall be enforceable at our branch office at situated at (Address of local branch).

Yours truly,
Signature and seal of the guarantor:
Name of Bank &Address:
Date:

Instruction to Bank: Bank should note that on expiry of Bond Period, the Original Bond will not be returned to the Bank. Bank is requested to take appropriate necessary action on or after expiry of bond period.

FORMAT FOR EARNEST MONEY DEPOSIT / BID BOND

(To be typed on Non-judicial stamp paper of value Indian Rupees One Hundred)

(TO BE ESTABLISHED THROUGH ANY OF THE NATIONALBANKS (WHETHER SITUATED AT MANGALURU OR OUTSTATION) WITH A CLAUSE TO ENFORCE THE SAME ON THEIR LOCAL BRANCH AT MANGALURU OR ANY SCHEDULED BANK (OTHER THAN NATIONALISED BANK) SITUATED AT MANGALURU. BONDS ISSUED BY CO-OPERATIVE BANKS ARE NOT ACCEPTED)

LETTER OF GUARANTEE

To

Registrar,
National Institute of Technology Karnataka,
Srinivasnagar P.O., Surathkal
Mangaluru – 575025

IN ACCORDANCE WITH YOUR TENDER for supply of, M/s.....
(hereinafter called the "Bidder") having its Registered Office at, wish to participate in the said bid for the supply as an irrevocable Bank Guarantee against Earnest Money Deposit for an amount of Rs. (Rupees.....) valid upto **(180 days from the date of issue of Bank Guarantee)**, is required to be submitted by the bidder as a condition precedent for participating in the said bid, which amount is liable to be forfeited by the Purchaser on (1) the withdrawal or revision of the offer by the bidder within the validity period, (2) Non acceptance of the Letter of Indent/Purchase order by the Bidder when issued within the validity period, (3) failure to execute the contract as per contractual terms and condition with in the contractual delivery period and (4) on the happening of any contingencies mentioned in the bid documents.

During the validity of this Bank Guarantee:

We,(Bank name) having the registered Office at.....guarantee and undertake to pay immediately on first demand by NITK Surathkal, an amount of Rs..... (Rupees.) without any reservation, protest, demur and recourse. Any such demand made by the NITK Surathkal shall be conclusive and recourse. Any such demand made by the purchaser shall be binding on the Bank irrespective of any dispute or difference raised by the Bidder.

The Guarantee shall be irrevocable and shall remain valid upto.....(180 days from the date of issue of Bank Guarantee) If any further extension is required, the same shall be extended to such required period on receiving instruction from the Bidder, on whose behalf the is Guarantee is issued.

Notwithstanding anything contained herein:

- * Our liability under this Bank Guarantee shall not exceed Rs..... (Rupees.....).
- * This Bank Guarantee shall be valid upto (date).
- * We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee Only and only if you serve upon us a written claim or before (date).

This Bank further agrees that the claims if any, against this Bank Guarantee shall be enforceable at our branch office atsituated at(Address of local branch).

Yours truly,

Signature and seal of the guarantor: Name of Bank:

Address:

Date:

Instruction to Bank: Bank should note that on expiry of Bond Period, the Original Bond will not be returned to the Bank. Bank is requested to take appropriate necessary action on or after expiry of bond period

Detailed Technical Specifications

Diesel Engine:

➤ Engine rating

The engine shall be multi cylinders, vertical, 4 stroke cycles, water-cooled, diesel engine developing suitable BHP for giving a prime power output of 500 kVA at 0.8 P.F. at the load terminals of the respective alternators (exclusive of the power requirements of auxiliaries deriving power from the engine) (as per ISO 8528 part- I).

The engines shall be capable for delivering specified prime power rating at variable loads for PF of 0.9 lag with 10% overload available in excess of specified 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. The engines shall conform to BS 5514/ BS 649/ IS10000/ ISO: 3046 amended up to date. The engines shall be fitted with the following accessories.

- i) Dynamically balanced Fly-wheel.
- ii) Necessary flexible coupling and guard for alternator and engine.
- iii) Air cleaner dry type with replaceable elements.
- iv) Corrosion Inhibitor Coolant, if applicable.
- v) An Electronic speed governor to maintain engine speed at all conditions of load.
- vi) M.S. sheet daily fuel service tank suitable for a minimum **capacity of 990 Ltrs.** The tank should be provided with inlet arrangement for direct filling, outlet connections, air vent, drain plug and level indicator (gauge). M.S fuel piping from tank to the engine with valves, unions, reducers, flexible hose connection, etc. The location of the tank shall be within the acoustic enclosure as per standard manufacturers design. For 500 kVA DG set minimum fuel tank capacity should be **990 Ltrs.**
- vii) Residential exhaust silencers with flanges.
- viii) Self-starter 12 / 24 V D.C.
- ix) Battery Charger unit and voltage regulator, required a number of 12 Volts pure lead thin tin plate batteries of Ampere hour rating as recommended by the manufacturer, insulated battery racks with interconnecting leads and terminals. The connection between battery charger and batteries shall be provided with suitable copper leads with lugs etc.
- x) Necessary pumps for lubricating oil, priming of the engine fuel system, etc. as required.
- xi) Exhaust gas turbocharger with aftercooler.
- xii) Lubricating oil cooler.
- xiii) Lubrication oil filters with replaceable elements.
- xiv) Fuel injector.
- xv) Fuel control solenoid.
- xvi) Fuel pump with engine speed adjustment.
- xvii) Engine Control Panel fitted and having a digital display for following:
 - (a) Start/stop key switch.
 - (b) Lube oil pressure indication.
 - (c) Water temperature indication.
 - (d) RPM indication.
 - (e) Engine Hours indications.
 - (f) Battery charging indication.
 - (g) Low lube oil trip indication.

- (h) High water temperature indication.
- (i) Over speed indication

- xviii) Safety controls against low lube oil pressure, high lube oil temperature, high cooling water temperature and fail to start.
- xix) Base frame as per manufacturer's specification including required nos. of anti- vibration cushy foot mountings.
- xx) A necessary over-speed trip on the engine.
- xxi) Exhaust piping wrapped with mineral wool/rock wool complete with aluminum cladding
- xxii) Heavy Duty Radiator, radiator fan, and mounting.

All moving parts of the engine shall be mechanically guarded in such manner that a human finger cannot touch any moving part.

Necessary certificate indicating the compliance of the above capacity requirement for the engine model so selected along with compliance of Noise and Emission norms as per latest CPCB guidelines for DG set capacity up-to 1000 kVA, should be furnished from the manufacturers along with the technical bid. However, above 1000 kVA DG set, manufacturers shall furnish certificate that the engine for the DG set complies with the CPCB Emission norms.

1. Governor

1.1 The Governor shall be Electronic type confirming to class A1 and shall be a self-contained unit capable of monitoring speed. This should confirm to ISO 3046 / BS 5514 with actuator as per standard design of manufacturer.

1.2 Frequency variation

The engine speed shall be so maintained that frequency variation at constant load including no load shall remain within a band of 1% of rated frequency.

1.3 Fuel System

It shall be fed through engine driven fuel pump. A replaceable element of fuel filter shall be suitably located to permit easy servicing. The daily service tank shall be complete with necessary supports, gauges, connecting pipe work etc. Pipe sealant should be used for sealing all connections. No Teflon tape is to be used.

1.4 Lubricating oil system

It shall be so designed that when the engine starts after a long shut down lubricating failure does not occur. Necessary priming pump for the lub oil circuit as per the recommendation of the manufacturer shall be installed, to keep bearings primed. This pump shall be normally automatically operative on AC/DC supply available with the set.

1.5 Starting System: -

This shall comprise of necessary set of pure lead thin tin plate batteries 12 V D.C. and suitable starter motors, axial type gear to match with the toothed ring on the fly wheel. Battery capacity shall be suitable for meeting the needs of the starting system as well as the requirements of control panel, indications and auxiliaries such as priming pump etc. as applicable. The scope shall cover all cabling, terminals, including initials charging etc. The system shall be capable of starting the DG Set within 20-30 sec, even in winter condition with an ambient temperature down to 0⁰ C.

1.6 Piping work

All pipe lines and fittings and accessories required inside the engine room /enclosure and outside for exhaust piping shall be provided by the contractor. This shall include necessary flexible pieces in the exhaust, fuel, lube oil and water as are necessary in view of the vibration isolation requirement in the installation. Piping of adequate size shall be used for lub. Oil of the materials as per manufacturer's standard. However, only MS pipes for the exhaust and fuel oil lines shall be used.

The pipe work shall be inclusive of all fittings and accessories required such as bends, reducers, elbows, flanges, flexible connections, necessary hardware's etc. The installation shall cover clamps, supports, hangers etc. as are necessary for completing the work.

1.7 Common bed plate

Engine and alternator shall be coupled by means of flexible coupling as per manufacturer's standard design and both units shall be mounted on a common bed plate together with all auxiliaries to ensure perfect alignment of engine and alternator with minimum vibrations. Fabricated bed plate will be acceptable. The bed plate shall be suitable for installation on suitable anti-vibration mounting system.

1.8 Exhaust System

- 1.8.1 Exhaust piping: All MS pipes for exhaust lines shall be conforming to relevant IS. The runs forming part of factory assembly on the engine, flexible connections up to exhaust silencer shall be exclusive of exhaust piping item. The work includes necessary cladding of exhaust pipe work using mineral wool/ glass wool/ rock wool of 50 mm thick & aluminum cladding (0.80 mm thick) for the complete portion. The exhaust pipe work includes necessary flexible vibration damper etc. to avoid any load & stress on turbo charges / exhaust manifold. The exhaust pipe support structure shall be got approved by engineer -in-charge before execution.
- 1.8.2 Exhaust system should create minimum back pressure.
- 1.8.3 Number of bends should be kept minimum and smooth bends should be used to minimize back pressure.
- 1.8.4 Pipe sleeve of large dia should be used while passing the pipe through concrete wall & gap should be filled with 'felt lining.
- 1.8.5 Exhaust flexible shall have it's free length when it is installed.
- 1.8.6 'Class B' MS pipes and long bend / elbows should be used.
- 1.8.7 The exhaust outlet should be in the direction of prevailing winds and should not allow exhaust gases to enter air inlet / windows etc.
- 1.8.8 When tail end is horizontal, 45 Degree bevel cut should be given at the end of the pipe to avoid rain water entry into exhaust piping.
- 1.8.9 Optimum Silencer Location: Location of the silencer in exhaust system has very definite influence on both reduction of noise and back pressure imposed on the system.
- 1.8.10 Care should be taken to ensure that no carbon particle emitted due to exhaust leaking enters and deposits on alternator windings and on open connections.
- 1.8.11 Support to exhaust piping: Exhaust piping should be supported in such manner that load of exhaust piping is not exerted to turbo charger/exhaust manifold.

2. Air System

It is preferable to provide vacuum indicator with all engines to indicate choked filter. Maximum air intake restrictions with clean and choked filters should be within prescribed limit as per OEM / manufacturer recommendation for particular model of the engine. Genset should be supplied with medium duty air cleaners.

3. Cooling System

- I. System should be designed for ambient temperature of 40 Deg.C.
- II. Coolant should be used mixed with additive (in suitable proportion) as per recommendation of OEM / Manufacturer for various engine models.
- III. Radiator fan flow should be free from any obstruction.

- (b) (i) 10% overload
(ii) 50% overload

One hour in every 12 hrs. of continuous use.
15 sec

4.7 Terminal Boxes: Terminal boxes shall be suitable for UG cables and shall have provision for connecting single runs of 3.5 core x 400 sq. mm UG cable. The terminal box shall be suitable to withstand the mechanical and terminal stresses developed due to any short circuit at the terminals.

4.8 Earthing & Earth terminals: 6nos. of chemical earth pits should be provided for energizing the DG of below specification: Chemical earthing for grounding conduits IC cut-outs and other equipment's on the meter board by using copper bonded /SS rod with earth enhancing backfill compound which is non-corrosive, thermally conductive potential to permissible limits superior fault conduction capacity nontoxic, weather resistance and capable of achieving ohmic value less than one ohm. using 6ft copper bonded rod with back fill compound with earth chamber and naming of earth pit.
Test certificate should be provided for the same by authorized agency.

5. AMF/Engine Control Panel

Fabricating, Installing, Testing & Commissioning of automatic mains failure control including manual by-pass panel, suitable for 500 KVA silent type DG set complete with relays, timers, set of CTs for metering & protection and energy analyzer to indicate currents, phase and line voltages, frequency, power factor, KWH, KVARH & provision for overload, short circuit, restricted earth fault, under frequency, control cabling from AMF panel to diesel engine and elsewhere if required all complete and inter locking including the following :

- 800 Amps, 4 pole by pass arrangement- 1 Set.
- 800 Amps, 50 kA (Ics=Icu), 4 pole motorized electrically operated draw out with cradle type 3 position ACB with electronic release for O/C & E/F and shunt trip - 2 Nos.
- 800 Amps (AC-3 rating) power contactor for 3 phases and suitable rating (AC-3 rating) power contactor for neutral for main and alternator etc. - 2 sets
- Microprocessor based engine control unit for automatic function/emergency/stand by power supply system - 1 no
- IDMT relay for over current protection for 3 phase - 1 Set
- Auto/Manual/Test/Off selector switch
- 2 Nos. over voltage relay and 2 Nos. under voltage relay 3 Sets of current transformers 15 P 10 accuracy for protection and 15 VA class-I for metering
- Energy analyzer unit to indicate current voltage frequency power factor and KWH
- Indicating lamps for load on mains and load on set
- Fuse for instruments
- Battery charger, complete with transformer/rectifier, D.C. voltmeter and ammeter, selector switch for trickle, off and boost and current adjustment
- Main supply failure monitor, Supply failure timer, Restoration timer
- Control unit with three impulse automatic engine start/stop and failure to start lockout.
- Impulse counter with locking and reset facility
- ON/OFF/Control circuit switch with indicator
- Audio/Video annunciation for: Low lubricating oil pressure, Engine over speed, Engine fails to start, Full load / maximum load warning

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

5.2 Equipment requirements: The AMF control cubicle shall incorporate in to assembly the general equipment

and systems as under:

- (a) Control system equipment's and components such as relays, contactors, timers etc both for automatic operation on main failure and as well as for manual operation.
- (b) **GPS enabled remote monitoring system to ON/OFF & monitor the AMF through app/website.**
- (c) Equipment and components necessary for testing generating sets' healthiness with test mode and with load on mains
- (d) Necessary instruments and accessories such as combined meters for voltage, current, power factor, frequency, KW, KVA etc. and KWH meter with selector switch/ buttons for to obtain the reading of desired parameters.
- (e) Necessary indication lamps, fuses, terminal blocks, push buttons, control switches etc. as required.
- (f) Necessary engine/ generating set shut-down devices due to faults/ abnormalities.
- (g) Necessary Visual Audio alarm indication and annunciation facility, as specified.
- (h) Necessary Battery charger.
- (i) Necessary excitation control and voltage regulating equipment's.

6. System Operations: The above mentioned facilities provided shall afford the following operational requirements

6.1 Auto Mode:-

- a) A line voltage monitor shall monitor supply voltage on each phase. When the mains supply voltage fails completely or falls below set value (variable between 80 to 95% of the normal voltage value) on any phase, the monitor module shall initiate start-up of diesel engine. To avoid initiation due to momentary disturbance, a time delay adjustment between 0 to 5 second shall be incorporated in start-up initiation.
- b) A three attempt starting facility shall be provided 6 seconds ON, 5 seconds OFF, 6 seconds ON, 5 seconds OFF, 6 seconds ON. If at the end of the third attempt, the engine does not start, it shall be locked out of start and a master timer shall be provided for this function. Suitable adjustment timers are to be incorporated which will make it feasible to vary independently ON-OFF setting periods from 1-10 seconds. If alternator does not build up voltage after the first or second start as may be, further starting attempt will not be made until the starting facility is reset.
- c) Once the alternator has built up voltage, the alternator circuit breaker shall close connecting the load to the alternator. The load is now supplied by the alternator.
- d) When the main supply is restored and is healthy as sensed by the line voltage monitor setting, both for under voltage and unbalance, the system shall be monitored by a suitable timer which can be set between 1 minute to 10 minutes for the load to be transferred automatically to main supply and the DG set is shut down after the preset duration of idle run.
- e) The diesel alternator set reverts to standby for next operation as per (a), (b) and (c) above.

6.2 Manual Mode

- a) It should be feasible to start-up the generator set by the operator on pressing the start push button.
- b) Three attempts starting facilities shall be operative for the start up function.
- c) Alternator circuit breakers closing and trip operation shall also be through the operator only by pressing the appropriate button on the panel and closure shall be feasible only after alternator has built up full voltage. If load is already on 'mains', pressure on 'close' button shall be ineffective.
- d) Engine shut down, otherwise due to faults, shall be manual by pressing a stop button.

6.3 Test Mode

- a) When under 'test' mode, pressing of 'test' button shall complete the start up sequence simulation and start the engine. The simulation will be that of mains failure. Sequence 11.1 (a) and (b) shall be completed.
- b) Engine shall build up voltage but the set shall not take load by closing of alternator circuit breaker. When the load is on the mains, monitoring of performance for voltage/frequency etc. shall be feasible without supply to load.
- c) If during test mode, the power supply has failed, the load shall automatically get transferred to alternator.
- d) Bringing the mode selector to auto position shall shut down the set as per sequence 11.1 (d) provided main supply is ON. If the mains supply is not available at that time, the alternator shall take load as in (c) above.

6.4 Engine shut down and alternator protection equipment's

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

- a) Engine
 - i) Low lubricating oil pressure shut down. This shall be inoperative during start-up and acceleration period.
 - ii) High coolant (Water) temperature shut down.
 - iii) Engine over speed shut down.
- b) Alternator protection
 - i) Overload
 - ii) Short circuit
 - iii) Earth fault
 - iv) Over voltage

6.5 Monitoring and metering facilities required in AMF panel

- a) Necessary instruments for visual monitoring of mains, alternator and load voltage, current, frequency, power factor, KW, KVA, KWH, etc.
- b) When ever AMF panel starts/stops the DG ,a message should be sent to registered mobile no's the details regarding the failure/disturbance of main power and vice versa.
- c) The AMF panel should start/stop the DG whenever the command from app/website receives.
- d) The Fuel gauge shall be electrically operated - fuel gauge shall have to be provided inside the enclosure. The fuel gauge should be able to show the level of the fuel even when the DG Set is not running. Whenever the fuel is low the AMF should send the message to registered mobile no's regarding the low fuel quantity.
- e) A set of visual monitoring lamp indication for:
 - i) Load on set
 - ii) Load on mains
 - iii) Set on Test (Alternator on operation duty, Alternator on standby duty)
 - iv) Set of lamps for engine shut down for over speed, low lube oil pressure and high coolant water temp, overload trip of alternator, earth fault trip of alternator, engine lock out and failure to start etc. All these indications shall have an audio and visual alarm. When operator accepts the alarm, the hooter will be silenced and the fault indication will become steady until reset by operating a reset button.

6.6 Operating devices

A set of operation devices shall be incorporated in the front of panel as under.

a) Master Engine Control Switch

This shall cut off in "OFF" position DC control supply to the entire panel, thus preventing start-up of engine due to any cause. However, battery charger, lamp test button for testing the healthiness of indication lamps, DC voltmeter, ammeter etc. shall be operative. It shall be feasible to lock the switch in OFF position for maintenance and shut down purposes.

- b) Operation selector switch OFF/AUTO/MANUAL/TEST position.
- c) A Set of push buttons as specified.
- d) Necessary battery charger with boost / trickle selector, DC voltmeter and DC ammeter.

7. Battery / Electrical System

7.1 Battery

- 7.1.1 Batteries supplied with Genset are generally dry and uncharged. First charging of uncharged batteries should be done from authorized battery charging Centre.
- 7.1.2 Batteries should be placed on insulated stands and relatively at cool place.
- 7.1.3 The battery capacity should be as per the recommendations of the manufacturer with 24 Volts electrical system and the size of copper conductor battery cable should be of 70 sq.mm.
- 7.1.4 Battery shall be of pure lead thin tin plate type any.

7.2 Cabling

- 7.2.1 Power cabling (including their termination) between alternator to the AMF panel should be done with 300* 2 run size of 3.5 core aluminum conductor cable of 30 mts length.
- 7.2.2 Multi core copper cable should be used for inter connecting the engine controls with the switch gear and other equipment's.
- 7.2.3 It is recommended to support output cables on separate structure on ground so that weights of cables should not fall on alternator / base rail.

Scope of Work:

The detailed scope of supply, Installation, and commissioning of 500 kVA DG in NITK with AMF panel and all other accessories of the institute includes the following:

- a) Diesel Generating Set with 500 kVA capacity at 0.8 power factor developing 415 volts 3 phase 4 wire output with the engine and alternator mounted on common bedplate completely and all accessories required. The DG Sets shall be capable of delivering the desired kVA at 0.9 P.F. for the external load after meeting its own requirement for auxiliaries etc. and after accounting for de-rating due to various factors.
- b) Necessary acoustic enclosure.
- c) Necessary piping required for Fuel, Lubricating oil system, and exhaust piping.
- d) Necessary batteries for started including cable work as per the schedule of quantities.
- e) Necessary Engine control Panel and AMF panel as per detailed specification.
- f) Necessary set of suitable vibration isolation mountings.
- g) Minor building work including cutting and making good of openings in wall and floors, grouting, etc. as required.
- h) All clamps support etc. for all components of the installation as required.
- i) Necessary earthing sets for the system neutral and body earthing and earth leads for connections etc.
- j) Power cable from 500 kVA D.G. Set to its AMF panel.

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

INSPECTION AND TESTING

a. The successful tenderer will arrange staff/fuel/POL for a test run at his cost.

b. **Pre-dispatch Inspection and Testing of DG sets:** All functional testing including 110% overload testing shall necessarily be carried out at factory/ manufacturer premises in presence of a representative of the Department.

For testing, following procedure will be followed: All major items/equipment i.e. engine & alternator in assembled condition, associated electrical control panels, etc. shall be offered for inspection and testing at factory/ manufacturers works. The successful tenderer shall give notice of minimum of two weeks for carrying out such tests. The Engineer-in-charge/ or his authorized representative shall witness such inspection & testing at the mutually agreed date.

Warranty:

- 2-year comprehensive warranty. AMC for three years (after 2 years of warranty) to be quoted. Financial comparison will be done considering warranty and AMC values (Total 5 years). However initial purchase order will be for warranty period only.
- The entire 500 kVA DG, AMF panel and all other accessories supplied and installed should be under **onsite warranty of two** years against all types of defects and deficiencies from the date of handing over of the system to NITK.
- On-site comprehensive warranty will be effective from the date of successful installation and commissioning. Any defects found in the product/sub-product within the warranty period of 2 years shall be rectified/replaced by the vendor free of cost. During this period of warranty, servicing at the quarterly interval or earlier without any additional cost besides attending to call back services in case of break down shall be carried out free-of-cost. This includes replacement of parts and spare parts and any number of break down call.
- The comprehensive maintenance shall be carried out primarily at the premises of NITK on all working days during office hours or even beyond office hours or on holidays depending upon exigency of work as and when so required. In case, the service provider feels that the equipment cannot be repaired at site, they will carry and deliver the equipment at their own cost and get it repaired within 24 hours, failing which replacement shall be provided, the firm shall maintain proper service call sheets which will be duly signed by the Engineer and the concerned official of the department.
- The agency shall ensure that the equipment is retained in its original or higher configuration and form. In the event of any downward alteration to the equipment by the agency or any attachment made thereto, the agency shall pay for any repair/replacement and adjustments required to restore the equipment to its original state. The faulty equipment parts replaced must be new and equivalent in performance of existing parts.

- It shall be ensured that all the equipment is operational under the controlled power supply and all defective equipment if any shall be rectified/replaced without any additional cost to the NITK. The vendor will not raise any condition with regard to the working environments including voltage, earthing, etc. for equipment covered under WARRANTY.

Additional Mandatory Requirements:

1. General warranty is for two years, which is the minimum.
2. AMC for three years after warranty period needs to be quoted. L1 will be calculated considering AMC period. Payment for AMC will be done at the respective time.
3. **Any breakdown/service issue is to be sorted out within 72 hours. In case of delay beyond 72 hours, warranty period will be proportionally extended.**
4. Companies have to ensure equipment lands at NITK

MINIMUM BIDDER ELIGIBILITY CRITERIA FOR QUALIFYING TECHNICAL BID

The intending bidder must satisfy all the following requirements for qualifying in the technical bid. Self-attested copy of the related document should be submitted along with bids:

- The bidder must be a registered contractor of KPWD of Class III category (ELECTRICAL)/CPWD Class III or above / Registered original Equipment manufacturers. A self-attested copy of registration in case of CPWD contractors; registration under Shops and Commercial Establishment Act (or similar) evidencing registration as manufacturer/ dealer should be provided while submitting bids.
- The bidder must possess GST registration – a self-attested copy should be enclosed.
- The bidder must possess PAN registration with Income Tax department – a self-attested copy should be enclosed.
- The bidder must be registered under Employees Provident Fund (EPF) Act – a self-attested copy should be enclosed.
- The bidder must be registered under Employees State Insurance (ESI) Act – a self-attested copy should be enclosed.
- The agency must have the experience of having **successfully completed** similar work as follows during the past seven financial years (Enhancement at simple 7% per annum shall be considered to bring it to the current costing level) in any Central Government department/ State Government department/Central or State Government undertakings/ Central or State government autonomous bodies/Public or Private Sector Units/ Private firms:
 - **At least three single similar works, each work costing not less than ` 20 lakh and not less than SITC of 200 KVA dg capacity;**
 - OR
 - **Two similar works, each work costing not less than ` 29 lakh and not less than SITC of 300 kVA dg capacity;**
 - OR
 - **One similar work of not less than ` 39 lakh and not less than SITC of 400 KVA dg capacity;**

Similar work means supply, Installation and commissioning of DG along with AMF panel and other accessories.

- Self-attested copy of Work Experience certificate issued from Central Government department/ State Government department/Central or State Government undertakings/ Central or State government autonomous bodies/Public or Private Sector Units/ Private firms (**with a copy of TDS certificate in case of Private firms**) should be enclosed.
- Authorization letter from original equipment manufacturer (OEM) in respect of system integration, warranty conditions and technical support for the **supply, Installation and commissioning of 500 kVA DG along with AMF panel and other accessories**. OEM of DG should be present/occupational in India for more

than 10 years directly without Joint ventures.

However, this is not applicable to STARTUPS notified by the GO.I.

- The bidder should not have abandoned or suspended any awarded work of any organization during the past five financial years. Relevant proof in the form of a duly sworn affidavit (as per the format in the tender document) in this respect should be signed and uploaded (and the original be furnished by the successful bidder while executing the contract agreement).
- The agency should not have been blacklisted / debarred for competing by any organization during the past five financial years. Relevant proof in the form of a duly sworn affidavit (as per the format in the tender document) in this respect should be signed and uploaded (and the original be furnished by the successful bidder while executing the contract agreement)

Checklist for BIDDERS

BIDDERS to indicate whether the following are enclosed/mentioned by striking out the non- relevant option and the relevant technical bid documents should be in order.

Sl. No.	Documents	Content	Document Attached
1	Technical Bid	Self-Attested copy of GST & PAN Number	(Yes /No) Pg. No.
2		Licence certificate for manufacture /supply of the item & Factory license. Registration with EPF and ESI	(Yes /No) Pg. No.
3		Undertaking that the successful BIDDER agrees to give a 10% Performance Security.	(Yes /No) Pg. No.
4		Catalogue of the Product with detailed product specifications.	(Yes /No) Pg. No.
5		Copy of Balance Sheet	(Yes /No) Pg. No.
6		List of Owner/partners of the firm and their contact numbers (Bidder Information)	(Yes /No) Pg. No.
7		Contract form given in section 5	(Yes /No) Pg. No.
8		Format of compliance statement of specification as per Annexure-'A'	(Yes /No) Pg. No.
9		Previous Supply Order as per Annexure-'B'	(Yes /No) Pg. No.
10		Declaration of abandoned or suspended any awarded service & Blacklist Certificate. Annexure 'C'	(Yes /No) Pg. No.
11		Integrity Pact. Annexure 'D'	(Yes /No) Pg. No.
12		Bank details of the bidder. Annexure 'E'	(Yes /No) Pg. No.
13		EARNEST MONEY DEPOSIT Annexure -G In case of exemption from submission of EMD, proof of registration with NSIC/MSME	(Yes /No) Pg. No.
1	Financial-Bid	Price bid	(Yes /No)

Seal and Signature of the bidder