



No.:	18/ASS/PAC(835)26PB/T-36	Date:	12.08.2026
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From: Director
To, M/s Zera India Pvt. Ltd.,
A-47, Sector 25, GIDC Electronic Estate,
Gandhinagar,
Gujarat-382 024

Ref- Quotation No.: ZIPL/Offer/26-27/088

Date: 07-Jul-2026

Dear Sir/Madam,

Quotation is invited on the behalf of the Director, CSIR-NPL for the purchase/repair of articles mentioned below. **The bid must be submitted ONLINE in case of Indian supplier at CPPP Portal** as per dates/times mentioned on the CPPP Portal/Email. **For the purpose of bid evaluation, ONLY ONLINE SUBMITTED BID ON CPPP PORTAL WILL BE USED IN CASE OF INDIAN SUPPLIER.**

Sr. No.	Description of material	Qty
01.	<u>Repair of COM5003 Power Comparator.</u> <u>Specifications as per attached Annexure-A</u>	01
Note: The prices of quotation should be up to NPL including freight & insurance charges, GST may be mentioned separately. In addition no additional payment will be made except from its quoted price. 1. PBG NA 2. EMD: NA 3. A price reasonability certificate may be submitted stating that you will not sell the quoted item to any other organization less than the quoted prices to NPL (as per Annexure-I on Letter Head of Bidder). 4. The rate of GST to be charged should be clearly mentioned in your quotation. 5. A Catalogue/Literature and HSN/Tariff code of the quoted model may be provided in the quotation. 6. PAC Certificate (Proprietary Article Certificate) stating that you are Sole manufacturer of the above mentioned item must be submitted along with quotation. 7. Installation: Completed by the seller within 30 days (if required). No separate charges towards installation shall be quoted. 8. Payment terms 100% through RTGS/NEFT/Wire Transfer after receipt of material and its satisfactory installation/completion. 9. In Case, the offer is submitted by the dealer of manufacturer/OEM, The Manufacturer Authorization Form (MAF)/ letter issued by OEM to quote on their behalf must be submitted along with offer (Annexure II). 10. Kindly submit Code of Integrity Certificate, Bid-Securing Declaration Form, Border Certificate & Multi Form along with your quotation (as per Annexure III, Annexure IV, Annexure V, Annexure VI). 11. Kindly provide recent order copies of offered item(s) of previous Purchase Orders to any CSIR/ Govt. organization.		

Instructions:

- Please indicate the Make, Model & item serial numbers, origin of country against the names of respective item quoted by you.
- Complete specifications of items should be given with the manufacturers name wherever required. Offer of stores vaguely described are liable to be ignored. Literature/Pamphlets should also enclose wherever necessary.

Yours Faithfully,

Store and Purchase Officer

TERMS & CONDITIONS

1. PRICES: Shall be quoted in Multi Currency including INR.

(A) For goods manufactured in India:

- (i) The price of goods quoted Ex-Works including taxes already paid.
- (ii) GST and other taxes like excise duty etc. which will be payable on the goods if the contract is awarded.
- (a) The charges for inland transportation, insurance and other local service required for delivering the goods at the desired destination as specified in the price schedule form.
- (b) The installation, commissioning and training charges including any incidental services, if any.

(B) For goods manufactured abroad:

- (i) The price of the goods, quoted on FCA (Named place of delivery abroad) or FOB (Named port of shipment), as specified in the schedule form.
- (ii) The charges for insurance and transportation of the goods to the port/place of destination.
- (iii) The agency commission charges, if any.
- (iv) The installation, commissioning and training charges including any incidental services, if any.

2. VALIDITY OF OFFER:

The Prices must be valid at least for a period of 90 days from the date of QUOTATION. No changes in prices will be acceptable in any condition after opening of tender till the validity of the offer or execution of the order whichever is later.

3. REASONABILITY OF PRICES

- (a) Please quote best minimum prices applicable for a premiere Research Institution, **leaving no scope for any further negotiations on prices.**
- (b) **The quoting party should give a certificate as per Annexure-I to the effect that** the quoted prices are the minimum and they have not quoted the same item on lesser rates than those being offered to NPL to any other customer nor they will do so till the validity of offer or execution of the purchase order, whichever is later.
- (c) Copies of **LATEST SUPPLY ORDERS** received from other customers along with details of such supply orders preferably in India for the same item/model **may be submitted with the offer** giving reasons of price difference of their supply order & those quoted to us, if any.
- (d) The party must give details of identical or similar equipment, if any, supplied to any CSIR lab during last three years along with the final price paid and Performance certificate from them.

4. SPECIFICATIONS:

Specifications are basic essence of the product. It must be ensured that the offers must be strictly as per our specifications. A quotation has to be supported with the printed technical leaflet/literature of the quoted model of the item by the quoting party/manufacturer and the specifications mentioned in the quotation must be reflected/supported by the printed technical leaflet/literature. Therefore the model quoted invariably be highlighted in the leaflet/literature enclosed with the quotation.

5. PERIOD & MODE OF DELIVERY: The delivery period is the essence of supply; hence it must be indicated specifically in the quotation. Mode of delivery, tentative size/dimension and weight of consignment may also be indicated in the quotation.

6. **PAYMENT CONDITION:**

A. FOR INDIGENOUS SUPPLIES

Payment will be made only after satisfactory installation, commissioning and performance of the equipment at NPL, New Delhi through NEFT and after certification by our technical expert/scientist, ~~subject to submission of 5% Performance Bank Guarantee of basic order value, valid till 60 days after the warranty period, if required.~~

B. FOR IMPORTS:

The payment against imports shall be made through Irrevocable L/C. However, 90% amount shall be released on presentation of complete and clear shipping documents and remaining 10% shall be released after satisfactory installation/demonstration/commissioning of subject order material ~~subject to submission of 3% Performance Bank Guarantee of basic order value, valid till 60 days after the warranty period, if required.~~

OR

The payment for imported goods shall be made 100% through wire transfer/Telegraphic Transfer within 30 days after receipt of goods and satisfactory installation ~~subject to submission of 3% Performance Bank Guarantee of basic order value, valid till 60 days after the warranty period, if required.~~

7. **COMMENCEMENT OF WARRANTY PERIOD:** The warranty period of an item shall commence after receipt of the items in good working condition and from the date of its satisfactory installation/commissioning/demonstration at the project site in NPL, New Delhi.
8. **NO ADVANCE PAYMENT:** No advance payment will be made to any supplier.
9. ~~**INSTALLATION:** The Spare parts /equipment should be installed/commissioned and demonstrated, by the supplier at NPL immediately but in any case within **ONE MONTH** after receipt of the item in NPL and the same will be put under operation to the satisfaction of our technical expert/Scientist who will test the performance of the equipment. No separate charges for installation etc. will be paid to the party beyond the quoted prices.~~
10. **GUARANTEE/WARRANTY:** The Spare parts/equipment/instrument must be guaranteed/warranted for a period of at **Three YEAR**, ~~if not specifically mentioned otherwise in the specifications sheet, from the date of its satisfactory installation/commissioning~~ against all manufacturing defects. If the equipment is found defective during this period the whole equipment or part thereof will have to be replaced/repared by the supplier free of cost at the NPL or at site of the supplier for which 'to and fro' expenses will be borne by the supplier. However, if the items are guaranteed for a period of more than one year, it may be specifically mentioned in the quotation, if required.
11. **AFTER SALES SERVICES:** It should be clearly mentioned in the quotation whether the after sales services during and after the completion of warranty shall be provided directly by the supplier or their authorized agent/representative. Terms of the after sales services, if any, may be mentioned in the offer. However, in both the cases the original supplier shall be responsible for poor performance/services.

12. **INSPECTION :**

- a) The inspection of the system will be done by our technical expert /Scientist in the presence of firm's representative.
- b) In case of receipt of the material in short supply or damaged condition the supplier will have to arrange the supplies/ replacement of goods free of cost pending the settlement of the insurance case wherever applicable on FOR at the NPL. Or CIF basis till satisfactory installation of the system.
- c) The supplier **should arrange for physical Inspection of the items directly or through their authorized representative within seven days of arrival of the consignment failing which they will be responsible for the losses.** After the shipment is effected, the supplier/its representative/Indian agents must remain in touch with the lab/Instt. to ascertain the date of arrival of consignment.

13. **AUTHORIZATION OF INDIAN AGENTS & INDIAN REPRESENTATIVE:**

In case there is involvement of an /Indian agent/representative in any form as mentioned at (b) below, an authority letter / copy of agreement from the principal manufacturer must be submitted with the quotation.

Where quoting party/Indian representative claims to be the subsidiary or branch office or an authorized representative of the principal foreign manufacturer/supplier in India, then a copy of approval from RBI/Ministry for operating business in India as Subsidiary/Branch/Liaison office or Joint-Venture may be submitted with offer.

The details of all supplies involving the foreign exchange shall be furnished to the Enforcement Directorate, New Delhi as per rule. It may be noted that only the quoting parties & their principals shall be responsible for violation of Foreign Exchange Management Act (FEMA) for not declaring the actual bilateral mutual interests, if any.

Indian agency commission shall be paid only to the Indian Agents in Indian Rupee out of the quoted FOB/Ex-works prices, after receipt of goods in good working condition & satisfactory installation/demonstration/commissioning of the items.

14. **USERS LIST :**

If you have supplied identical or similar Spare parts /equipment to any other CSIR Labs./Instts., the details of such supplies for the preceding three years shall be given together with the prices finally paid.

15. **LD CLAUSE FOR LATE DELIVERY & LATE INSTALLATION:**

- Subject to operation of Force Majeure, time for delivery and acceptance is the essence of this contract. The supplier shall arrange to ship the ordered materials within the delivery period mentioned in the order unless extended with/without penalty.
- **In case of delay in supply and/or late installation of the equipment/instrument on part of the supplier, a LD @ 0.5% per week of basic Order/FOB value will be charged for delayed period subject to a maximum of 10% of order/FOB value.**
- If the delay in the shipment of the ordered materials attributable to the supplier exceeds agreed time period from the date of original agreed upon date of shipment and extended with/without penalty, the NPL, New Delhi shall have the right to cancel the contract/purchase order and recover the liquidated damages from other dues of the party or by legal means. It will also affect the other/future business dealings with such suppliers.

16. **Code of Integrity**

The bidders/suppliers should sign a declaration about abiding by the Code of Integrity for Public Procurement in bid documents. In case of any transgression of this code, the bidder is not only liable to be removed from the list of registered suppliers, but it would be liable for other punitive actions such as cancellation of contracts, banning and blacklisting or action in Competition Commission of India, and so on.

- a. **Code of integrity for Public Procurement:** The Purchaser as well as bidders, suppliers, contractors and consultants should observe the highest standard of ethics and should not indulge in the following prohibited practices, either directly or indirectly, at any stage during the procurement process or during execution of resultant contracts:
- b. **“corrupt practice”:** making offers, solicitation or acceptance of bribe, rewards or gifts or any material benefit, in exchange for an unfair advantage in the procurement process or to otherwise influence the procurement process or contract execution;
- c. **“fraudulent practice”:** any omission or misrepresentation that may mislead or attempt to mislead so that financial or other benefits may be obtained or an obligation avoided. This includes making false declaration or providing false information for participation in a tender process or to secure a contract or in execution of the contract;
- d. **“anti-competitive practice”:** any collusion, bid rigging or anti-competitive arrangement, or any other practice, coming under the purview of the Competition Act, 2002, between two or more bidders, with or without the knowledge of the purchaser, that may impair the transparency, fairness and the progress of the procurement process or to establish bid prices at artificial, non-competitive levels;
- e. **“Coercive practice”:** harming or threatening to harm, persons or their property to influence their participation in the procurement process or affect the execution of a contract;
- f. **“conflict of interest”:** participation by a bidding firm or any of its affiliates that are either involved in the consultancy contract to which this procurement is linked; or if they are part of more than one bid in the procurement; or if the bidding firm or their personnel have relationships or financial or business transactions with any officials of purchaser who are directly or indirectly related to tender or execution process of contract; or improper use of information obtained by the (prospective) bidder from the purchaser with an intent to gain unfair advantage in the procurement process or for personal gain; and
- g. **“Obstructive practice”:** materially impede the purchaser’s investigation into allegations of one or more of the above mentioned prohibited practices either by deliberately destroying, falsifying, altering; or by concealing of evidence material to the investigation; or by making false statements to investigators and/or by threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or by impeding the purchaser’s Entity’s rights of audit or access to information;

Obligations for Proactive disclosures:

- i. The purchaser as well as bidders, suppliers, contractors and consultants, is obliged under Code of Integrity for Public Procurement to suo-moto proactively declare any conflicts of interest (coming under the definition mentioned above – pre-existing or as and as soon as these arise at any stage) in any procurement process or execution of contract. Failure to do so would amount to violation of this code of integrity; and
 - ii. The bidder must declare, whether asked or not in a bid document, any previous transgressions of such a code of integrity with any entity in any country during the last three years of being debarred by any other Procuring Entity. Failure to do so would amount to violation of this code of integrity;
 - iii. To encourage voluntary disclosures, such declarations would not mean automatic disqualification for the bidder making such declarations. The declared conflict of interest would be evaluated and mitigation steps, if possible, taken by the purchaser. Similarly, voluntary reporting of previous transgressions of Code of Integrity elsewhere may be evaluated and barring cases of various grades of debarment, an alert watch may be kept on the bidder’s actions in the tender and subsequent contract.
- iv. **Punitive Provisions:**
- v. Without prejudice to and in addition to the rights of the Purchaser to other penal provisions as per the bid documents or contract, if the Purchaser comes to a conclusion that a (prospective) bidder/supplier, directly or through an agent, has violated this code of integrity in competing for the

contract or in executing a contract, the purchaser may take appropriate measures including one or more of the following:

vi. If his bids are under consideration in any procurement:

- i. Forfeiture or encashment of bid security;
- ii. Calling off of any pre-contract negotiations; and
- iii. Rejection and exclusion of the bidder from the procurement process.

If a contract has already been awarded

- i. Cancellation of the relevant contract and recovery of compensation for loss incurred by the purchaser;
- ii. Forfeiture or encashment of any other security or bond relating to the procurement;
- iii. Recovery of payments including advance payments, if any, made by the purchaser along with interest thereon at the prevailing rate.

Provisions in addition to above:

- h. Removal from the list of registered suppliers and banning/debarment of the bidder from participation in future procurements of the purchaser for a period not less than one year;
- i. In case of anti-competitive practices, information for further processing may be filed under a signature of the Joint Secretary level officer, with the Competition Commission of India;
- j. Initiation of suitable disciplinary or criminal proceedings against any individual or staff found responsible.

18. ACCEPTANCE OR REJECTION OF OFFER: The Director, NPL, New Delhi reserves the right to accept or reject any quotation /tender in part or full without assigning any reason thereof. The successful bidder should submit Order acceptance within 15 days from the date of issue.

19. Force Majeure

- i. **Notwithstanding the provisions of GCC Clauses relating to extension of time, penalty and Termination for Default the Supplier shall not be liable for forfeiture of its performance security, liquidated damages or termination for default, if and to the extent that, its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.**
- ii. For purposes of this Clause, “Force Majeure” means an event or situation beyond the control of the Supplier that is not foreseeable, is unavoidable, and its origin is not due to negligence or lack of care on the part of the Supplier. Such events may include, but not be limited to, acts of the Purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.
- iii. If a Force Majeure situation arises, the Supplier shall promptly notify the Purchaser in writing of such conditions and the cause thereof within 21 days of its occurrence. Unless otherwise directed by the Purchaser in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.
- iv. If the performance in whole or in part or any obligations under the contract is prevented or delayed by any reason of Force Majeure for a period exceeding 60 days, either party may at its option terminate the contract without any financial repercussions on either side.

20. **DISPUTE SETTLEMENT:** *The Purchaser and the Supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the Contract.*

If, after twenty-one (21) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the Purchaser or the Supplier may give notice to the other party of its intention to commence arbitration, as hereinafter provided, as to the matter in dispute, and no arbitration in respect of this matter may be commenced unless such notice is given. Any dispute or difference in respect of which a notice of intention to commence arbitration has been given in accordance with this Clause shall be finally settled by arbitration. Arbitration may be commenced prior to or after delivery of the Goods under the Contract.

The dispute settlement mechanism/arbitration proceedings shall be concluded as under:

- (a) *In case of Dispute or difference arising between the Purchaser and a domestic supplier relating to any matter arising out of or connected with this agreement, such disputes or difference shall be settled in accordance with the Indian Arbitration & Conciliation Act, 1996, the rules there under and any statutory modifications or re-enactments thereof shall apply to the arbitration proceedings. The dispute shall be referred to the Director General, Council of Scientific & Industrial Research and if he is unable to unwilling to act, to the sole arbitration of some other person appointed by his willing to act as such Arbitrator. The award of the arbitrator so appointed shall be final, conclusive and binding on all parties to this order.*
- (b) *In the case of a dispute between the Purchase and a Foreign supplier, the dispute shall be settled by arbitration in accordance with provision of sub-clause (a) above. But if this is not acceptable to the supplier then the dispute shall be settled in accordance with provisions of UNCITRAL (United Nations Commission on International Trade Law) Arbitration Rules.*

*The venue of the arbitration shall be the place from where the purchase order or contract is issued.
Notwithstanding any reference to arbitration herein,*

- (a) *The parties shall continue to perform their respective obligations under the contract unless they otherwise agree; and*
- (b) *The purchase shall pay the Supplier any monies due the Supplier.*

PRICE REASONABILITY CERTIFICATE

(On the Letter Head of the Bidder)

This is to certify that the prices quoted Vide Quotation No. _____

dated: _____ against Tender No: _____ dated: _____ for

(_____ name _____ of _____ item _____) _____ are best and minimum and we have not quoted the same on lesser rates than those being offered to CSIR-NPL to any customer nor we will do till the validity of offer or execution of Purchase Order.

Please See S.no. 3(c) of the Terms & Conditions regarding Reasonability of Prices and Attach relevant documents accordingly.

Date:

Authorized Signatory

Name:

Designation:

MANUFACTURERS AUTHORIZATION FORM

[The Bidder shall require the Manufacturer to fill in this Form in accordance with the instructions indicated. This letter of authorization should be on the letterhead of the Manufacturer and should be signed by a person with the proper authority to sign documents that are binding on the Manufacturer and be enclosed with the technical bid.]

Date: [insert date (as day, month and year) of Bid Submission]

Tender No.: [insert number from Invitation for Bids]

To: [insert complete name and address of Purchaser] WHEREAS

We [insert complete name of Manufacturer], who are official manufacturers of [insert type of goods manufactured], having factories at [insert full address of Manufacturer's factories], do hereby authorize [insert complete name of Bidder] to submit a bid the purpose of which is to provide the following Goods, manufactured by us [insert name and or brief description of the Goods], and to subsequently negotiate and sign the Contract.

We hereby extend our full guarantee and warranty in accordance with Clause 2.21 of the General Conditions of Contract, with respect to the Goods offered by the above firm.

Signed: [insert signature(s) of authorized representative(s) of the Manufacturer]

Name: [insert complete name(s) of authorized representative(s) of the Manufacturer]

Title: [insert title]

Duly authorized to sign this Authorization on behalf of: [insert complete name of Bidder]

Dated on _____ day of _____, _____ [insert date of signing]

Format for declaration by the Bidder for Code of Integrity & conflict of interest

(On the Letter Head of the Bidder)

Ref.No: _____

Date: _____

To,

(Name & address of the Purchaser)

Sir,

With reference to your Tender No. _____ dated _____

I/We hereby declare that we shall abide by the Code of Integrity for Public Procurement as mentioned under Para 1.3.0 of ITB of your Tender document and have no conflict of interest.

The details of any previous transgressions of the code of integrity with any entity in any country during the last three years or of being debarred by any other Procuring Entity are as under:

- a.
- b.
- c.

We undertake that we shall be liable for any punitive action in case of transgression/ contravention of this code.

Thanking you,

Yours sincerely,
Signature

(Name of the Authorized Signatory
Company)

C E R T I F I C A T E

(On the Letter Head of the Bidder)

IT IS CERTIFIED THAT :

I HAVE READ THE ORDER/ CLAUSE NO. F. NO. 6/18/2019-PPD DATED 23RD JULY,2020 REGARDING RESTRICTIONS ON PROCUREMENT FROM A BIDDER OF A COUNTRY WHICH SHARE A LAND BORDER WITH INDIA .

I AS A BIDDER DO NOT CONTRAVENE THE INSTRUCTIONS GIVEN IN THE ABOVE SAID ORDER.

SIGNATURE & SEAL OF THE FIRM

Bid-Securing Declaration Form

**(TO BE FILLED & SUBMITTED IN LIEU OF THE BID SECURITY/EMD ONLY IF GIVEN AS OPTION
IN NIT)**

Date: _____

Bid No. _____

To (insert complete name and address of the purchaser)

I/We. The undersigned, declare that:

I/We understand that, according to your conditions, bids must be supported by a Bid Securing Declaration.

I/We accept that I/We may be disqualified from bidding for any contract with you for a period of one year from the date of notification if I am /We are in a breach of any obligation under the bid conditions, because I/We

- (a) have withdrawn/modified/amended, impairs or derogates from the tender, my/our Bid during the period of bid validity specified in the form of Bid; or
- (b) having been notified of the acceptance of our Bid by the purchaser during the period of bid validity
 - (i) fail or reuse to execute the contract, if required, or (ii) fail or refuse to furnish the Performance Security, in accordance with the Instructions to Bidders.

I/We understand this Bid Securing Declaration shall cease to be valid if I am/we are not the successful Bidder, upon the earlier of (i) the receipt of your notification of the name of the successful Bidder; or (ii) thirty days after the expiration of the validity of my/our Bid.

Signed: (insert signature of person whose name and capacity are shown) in the capacity of (insert legal capacity of person signing the Bid Securing Declaration).

Name: (insert complete name of person signing the Bid Securing Declaration)

Duly authorized to sign the bid for an on behalf of : (insert complete name of Bidder)

Dated on _____ day of _____ (insert date of signing)

Corporate Seal (where appropriate)

(Note: In case of a Joint Venture, the Bid Securing Declaration must be in the name of all partners to the Joint Venture that submits the bid)

MULTI FORM

(**Bid Form**, **Bidder Information**, **Border Declaration**, **Code of Integrity**)

To:

The Director,
CSIR – National Physical Laboratory,
New Delhi, INDIA

We, the undersigned, declare that:

- a) We have examined and have no reservations to the Bidding Documents. We offer to supply in conformity with the Bidding Documents and in accordance with the Delivery Schedules specified in the Schedule of Requirements the following Goods and Related Services. Prices and discounts, if any, are mentioned in the Price Bid.
- b) **Our bid shall be valid for the period of time specified in the bid document** and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- c) We agree to submit Performance Security, if required, as per the terms of this bid document;
- d) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed. We understand that you are not bound to accept the written standard terms and conditions of our offer and also the lowest evaluated bid or any other bid that you may receive.
- e) **Border Declaration:** We have read clause regarding restriction on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries; **We certify that the bidder is not from such a country** or, if from a such a country, has been registered with the Competent Authority and will not sub-contract any work to a contractor from such countries unless such contractor is registered with the competent Authority. A valid certificate issued by the Competent Authority has been attached with the bid. I hereby certify that this bidder fulfill all requirements in this regard and is eligible to be considered.(As per requirements under P-45021/112/2020-PP(BE-II)(E-43780) dated 24.08.2020 of Ministry of Commerce and Industry, Department for Promotion of Industry and Internal Trade and any amendments thereon.)
- f) **Declaration for Code of Integrity & Conflict of Interest:** I/We hereby declare that we shall abide by the Code of Integrity for Public Procurement as mentioned under **Clause 17** of your tender document and have no conflict of interest. The details of any previous transgressions of the code of integrity with any entity in any country during the last three years or of being debarred by any other Procuring Entity are as under:
 - 1.
 - 2.
 - 3.

Signature & Seal of Bidder / Authorized Signatory

Name of the Signatory

Annexure- A

Specification:

Item: repair of COM5003 power comparator

Purpose: to resolve the issue observed in amplification and measurement of section of B-Phase voltage.

1. **Voltage Measurement** (s): 100 mV ... 580 V

Voltage accuracy: $< 0.004 \% + < 0.0005\% @ 30 \text{ V} \dots 480 \text{ V}$
 $< 0.008 \% + < 0.001 \% @ 10 \text{ V} \dots < 30 \text{ V}$
 $< 0.008\% + < 0.001 \% @ 1\text{V} \dots < 10 \text{ V},$

2. **Current measurement:** 0.5 mA... 160 A

Current accuracy: $< 0.002 \% + < 0.0005 \% @ 50 \text{ mA} \dots 100 \text{ A}$
 $< 0.004\% + < 0.001 \% @ 10 \text{ mA} \dots < 50 \text{ mA} / > 100 \text{ A} \dots 160 \text{ A}$
 $0.007\% + < 0.003\% @ 1 \text{ mA} \dots < 10 \text{ mA}$

3. **Power/energy measurement accuracy:** $< 0.004\% + < 0.001 \% @ 50 \text{ mA} \dots 100 \text{ A}$

$< 0.006\% + < 0.0015 \% @ 10 \text{ mA} \dots < 100 \text{ A} / > 100 \text{ A} \dots 160 \text{ A}$
 $< 0.01\% + < 0.0035\% @ 1 \text{ mA} \dots < 10 \text{ mA}$