

Tender Details

Tender No: ISTRAC/PURC/2019E0168801

Tender Date: 24/04/2019

Purchase Entity: PURCHASE

Tender Notice

Tender Notice No. ISTRAC/PURC/201900168801

GOVERNMENT OF INDIA, DEPARTMENT OF SPACE, INDIAN SPACE RESEARCH ORGANISATION, ISRO
TELEMETRY TRACKING AND COMMAND NETWORK (ISTRAC), BANGALORE - 560 058.

e-Tenders are invited as per the details mentioned in the tender document which can be downloaded and bid to be submitted as per the Tender Schedule shown below after registering in our e-procurement portal <https://eprocure.isro.gov.in>. Interested parties are required to register themselves as vendors, if not already registered in our e-procurement portal <https://eprocure.isro.gov.in> by downloading plugins and help demos listed on the home page of the e-procurement link mentioned above to complete the vendor registration process. They can also seek help from help desk given on the home page for any technical help for registration and subsequent process. Vendors may please note that Vendor registration process in our e-procurement portal is to be completed to participate in this tender. For any help, Vendors may contact help-desk over phone No.020-67637500.

Tender Attachments

Technical Documents Only : These documents will be sent to Vendor

Attachment - I:

IDT0026600000000000isro05401.pdf

Attachment - II:

IDT0026600000000000isro05402.doc

Attachment - III:

IDT0026600000000000isro05403.docx

Attachment - IV:

IDT0026600000000000isro05404.docx

Attachment - V:

IDT0026600000000000isro05405.pdf

FORM B

INSTRUCTIONS TO TENDERERS:

GOVERNMENT OF INDIA

DEPARTMENT OF SPACE

ISRO TELEMETRY TRACKING AND COMMAND NETWORK (ISTRAC)

Plot No. 12 & 13, 3rd Main, 2nd Phase

PEENYA INDUSTRIAL AREA, BANGALORE –560 058

Phone No.: 080-28376383 Fax: 080-28094061 E-mail: purchase@istrac.org

INSTRUCTIONS TO TENDERERS AND TERMS AND CONDITIONS OF TENDERS FOR INDIGENOUS STORES ITEMS :

1.ISRO Telemetry Tracking and Command Network [ISTRAC] has implemented e-tender system for ONLINE tenders. ISTRAC invites offers through e-tender portal <https://e-procure.isro.gov.in> for the supply of items. The suppliers need to get enrolled in the e-tender portal to access tender and submit their offer online. Vendors need to have Digital Signature Certificate as detailed on our e-portal and corporate e-mail ID to register on the above portal. Only online tenders will be accepted. No Manual/Postal/courier/e-mail/Fax offers will be entertained. No Manual tender document will be issued by ISTRAC. Suppliers are requested to note and comply with the Instructions to tenderers for online submission of tenders through E-Procurement System indicated in the document "INSTRUCTIONS TO TENDERERS FOR ONLINE SUBMISSION OF TENDERS THROUGH E-PROCUREMENT".

2.Sales Tax and/or other duties/levies legally leviable and intended to be claimed should be distinctly shown separately in the tender.

a.CST/VAT/SERVICE TAX:

With effect from 01.04.2007, Form-D has been withdrawn for Inter-State purchases by Government Departments. Accordingly, the suppliers have to indicate clearly the percentage of CST/VAT applicable. Service Tax if any applicable has to be clearly indicated.

b. EXCISE DUTY:

ISTRAC is eligible for Excise Duty Exemption under Ministry of Finance, Department of Revenue, Government of India, vide Central Excise Notification No.10/97-Central Excise, dated 01.03.1997 as amended by Notification No. 16/2007 dated 01.03.2007 and necessary Exemption Certificate will be provided.

3. As a Government of India Department, this office is exempted from payment of Octroi and similar local levies. Tenderers shall ensure that necessary Exemption Certificates are obtained by them from the Purchase Officer concerned to avoid any payment of such levies.

4. a) Your quotation should be valid for 90 days from the date of opening of the tender.

b) Prices are required to be quoted according to the units indicated in the price bid form. When quotations are given in terms of units other than those specified in the price bid form, relationship between the two sets of units must be furnished.

5. Preference will be given to those tenders offering supplies from ready stocks and on the basis of FOR destination/delivery at site.

6. (a) All available technical literature, catalogues and other data in support of the specifications and details of the items should be attached through online mode only.

(b) Samples, if called for, should be submitted free of all charges by the tenderer and the Purchaser shall not be responsible for any loss or damage thereof due to any reason whatsoever. In the event of non-acceptance of tender, the tenderer will have to remove the samples at his own expense.

(c) Approximate net and gross weight of the items offered shall be indicated in your offer. If dimensional details are available the same should also be indicated in your offer.

(d) Specifications: Stores offered should strictly confirm to our specifications. Deviations, if any, should be clearly indicated by the tenderer in his quotation. The tenderer should also indicate the Make/Type number of the stores offered and provide catalogues, technical literature and samples, wherever necessary, along with the quotations. Test Certificates, wherever necessary, should be forwarded along with supplies. Wherever options have been called for in our specifications, the tenderer should address all such options. Wherever specifically

mentioned by us, the tenderer could suggest changes to specifications with appropriate response for the same.

7. The purchaser shall be under no obligation to accept the lowest or any tender and reserves the right of acceptance of the whole or any part of the tender or portions of the quantity offered and the tenderers shall supply the same at the rates quoted.

8. All amounts shall be indicated both in words as well as in figures. Where there is difference between amount quoted in words and figures, amount quoted in words shall prevail.

9. The tenderer should supply along with his tender, the name of his bankers as well as the latest Income-Tax clearance certificate duly countersigned by the Income-Tax Officer of the Circle concerned under the seal of his office, if required by the Purchaser.

10. The Purchaser reserves the right to place order on the successful tenderer for additional quantity up to 25% of the quantity offered by them at the rates quoted.

11. The authority of the person signing the tender, if called for, should be produced.

12. For items having shelf life, those with maximum shelf life should be supplied if order is placed.

13. The goods / material offered should be strictly as per our specifications. Change(s) in specifications, if any, should be clearly indicated by the supplier in his quotation. The supplier should also indicate make/type No. of the materials / equipments offered.

14. The drawings, specifications, end-use, etc., given by ISTRAC along with the tender enquiry, are confidential and shall not be disclosed to any third party.

15. In case of two-part tenders, parties shall submit their offers as follows:-

a) Part-I – Technical Bid:

Only Technical details shall be mentioned in this bid and shall not upload any details of price along with the technical bid. Vendor specified terms column is to be filled with out indicating any price details . If any Price detail is mentioned in the Technical Bid such offer shall be rejected.

b) Part-II – Price Bid:

Only the price details along with applicable taxes and other cost if any shall be indicated in the price bid form.

TERMS & CONDITIONS OF TENDER

1. DEFINITIONS:

(a) The term 'Purchaser' shall mean the President of India or his successors or assigns.

(b) The term 'Contractor' shall mean, the person, firm or company with whom or with which the order for the supply of stores is placed and shall be deemed to include the Contractor's successors, representative, heirs, executors and administrators unless excluded by the Contract.

(c) The term 'Stores' shall mean what the Contractor agrees to supply under the Contract as specified in the Purchase Order including erection of plants & machinery and subsequent testing, should such a condition is included in the Purchase Order.

d)The term 'Purchase Order' shall mean the communication signed on behalf of the Purchaser by an Officer duly authorised intimating the acceptance on behalf of the Purchaser on the terms and conditions mentioned or referred to in the said communication accepting the tender or offer of the Contractor for supply of stores or plant, machinery or equipment or part thereof.

2. PRICES:

Tender offering firm prices will be preferred. Where a price variation clause is insisted upon by a tenderer, quotation with a reasonable ceiling should be submitted. Such offers should invariably be supported by the base price taken into account at the time of tendering and also the formula for any such variation/s.

3. SECURITY DEPOSIT:

On acceptance of the tender, the Contractor shall, at the option of the Purchaser and within the period specified by him, deposit with him, in cash or in any other form as the Purchaser may determine, security deposit not exceeding ten percent of the value of the Contract as the Purchaser shall specify. If the Contractor is called upon by the Purchaser to deposit, 'Security' and the Contractor fails to provide the security within the period specified, such failure shall constitute a breach of the Contract, and the Purchaser shall be entitled to make other arrangements for the re-purchase of the stores Contracted at the risk of the Contractor in terms of Sub-Clause (ii) and (iii) of clause 10(b) hereof and/or to recover from the Contractor, damages arising from such cancellation.

4. GUARANTEE & REPLACEMENT:

(a) The Contractor shall guarantee that the stores supplied shall comply fully with the specifications laid down, for material, workmanship and performance.

(b) For a period of twelve months after the acceptance of the stores, if any defects are discovered therein or any defects therein found to have developed under proper use,

arising from faulty stores design or workmanship, the Contractor shall remedy such defects at his own cost provided he is called upon to do so within a period of 14 months from the date of acceptance thereof by the purchaser who shall state in writing in what respect the stores or any part thereof are faulty.

(c) If, in the opinion of the purchaser, it becomes necessary to replace or renew any defective stores such replacement or renewal shall be made by the Contractor free of all costs to the purchaser, provided the notice informing the Contractor of the defect is given by the purchaser in this regard within the said period of 14 months from the date of acceptance thereof.

(d) Should the Contractor fail to rectify the defects, the purchaser shall have the right to reject or repair or replace at the cost of the Contractor the whole or any portion of the defective stores.

(e) The decision of the purchaser notwithstanding any prior approval or acceptance or inspection thereof on behalf of the purchaser, as to whether or not the stores supplied by the Contractor are defective or any defect has developed within the said period of 12 months or as to whether the nature of the defects requires renewal or replacement, shall be final, conclusive and binding on the Contractor.

(f) PERFORMANCE BANK GUARANTEE: To fulfil guarantee conditions outlined in clause 4 (a) to (e) above, the Contractor shall, at the option of the purchaser, furnish a Bank Guarantee (as prescribed by the purchaser) from a Bank approved by the purchaser for an amount equivalent to 10% of the value of the Contract along with first shipment documents. On the performance and completion of the Contract in all respects, the Bank Guarantee will be returned to the Contractor without any interest.

(g) All the replacement stores shall also be guaranteed for a period of 12 months from the date of arrival of the stores at purchaser's site.

(h) Even while the 12 months guarantee applies to all stores, in case where a greater period is called for by our specifications then such a specification shall apply in such cases the period of 14 months referred to in para 4 (b) & (c) shall be the 'asked for' guarantee period plus two months.

5. PACKING FORWARDING & INSURANCE:

The Contractor will be held responsible for the stores being sufficiently and properly packed for transport by rail, road, sea or air to withstand transit hazards and ensure safe arrival at the destination. The packing and marking of packages shall be done by and at the expense of the Contractor. The purchaser will not pay separately for transit insurance, all risks in transit being exclusively of the Contractor and the Purchaser shall pay only for such stores as are actually received in good condition in accordance with the Contract.

6. DESPATCH:

The Contractor is responsible for obtaining a clear receipt from the Transport Authorities specifying the goods despatched. The consignment should be despatched with clear Railway Receipt/Lorry Receipt. If sent in any other mode, it shall be at the risk of the Contractor. Purchaser will take no responsibility for short deliveries or wrong supply of goods when the same are booked on 'said to contain' basis. Purchaser shall pay for only such stores as are actually received by them in accordance with the Contract.

7. TEST CERTIFICATE:

Wherever required, test certificates should be sent along with the despatch documents.

8. ACCEPTANCE OF STORES:

(a) The stores shall be tendered by the Contractor for inspection at such places as may be specified by the purchaser at the Contractor's own risk, expense and cost.

(b) It is expressly agreed that the acceptance of the stores Contracted for, is subject to final approval by the purchaser, whose decision shall be final.

(c) If, in the opinion of the purchaser, all or any of the stores do not meet the performance or quality requirements specified in the Purchase Order, they may be either rejected or accepted at a price to be fixed by the purchaser and his decision as to rejection and the prices to be fixed shall be final and binding on the Contractor.

(d) If the whole or any part of the stores supplied are rejected in accordance with Clause No. 8 (c) above, the purchaser shall be at liberty, with or without notice to the Contractor, to purchase in the open market at the expense of the Contractor stores meeting the necessary performance and quality Contracted for in place of those rejected, provided that either the purchase, or the agreement to purchase, from another supplier is made within six months from the date of rejection of the stores as aforesaid.

9. REJECTED STORES:

Rejected stores will remain at destination at the Contractor's risk and responsibility. If instructions for their disposal are not received from the Contractor within a period of 14 days from the date of receipt of the advice of rejection, the purchaser or his representative has, at his discretion, the right to scrap or sell or consign the rejected stores to Contractor's address at the Contractor's entire risk and expense, freight being payable by the Contractor at actuals.

10. DELIVERY:

(a) The time for and the date of delivery of the stores stipulated in the Purchase Order shall be deemed to be the essence of the Contract and delivery must be completed on or before the specified dates.

(b) Should the Contractor fail to deliver the stores or any consignment thereof within the period prescribed for such delivery, the purchaser shall be entitled at his option either.

(i) to recover from the Contractor as agreed liquidated damages and not by way of penalty, a sum of 0.5% per week of the price of any stores which the Contractor has failed to deliver as aforesaid or during which the delivery of such store may be in arrears subject to a minimum of 10%, or

(ii) to purchase from elsewhere, without notice to the Contractor on the account and at the risk of the Contractor, the stores not delivered or others of a similar description (where others exactly complying with the particulars, are not, in the opinion of the purchaser, readily procurable, such opinion being final) without cancelling the Contract in respect of the consignment (s) not yet due for delivery, or

(iii) to cancel the Contract or a portion thereof and if so desired to purchase or authorise the purchase of stores not so delivered or others of a similar description (where others exactly complying with the particulars are not, in the opinion of the purchaser, readily procurable, such opinion final) at the risk and cost of the Contractor.

In the event of action being taken under sub-clause (ii) & (iii) of clause 10 (b) above, the Contractor shall be liable for any loss which the purchaser may sustain on that account, provided that the re-purchase or if there is an agreement to re-purchase then such agreement is made within six months from the date of such failure. But the Contractor shall not be entitled to any gain on such re-purchase made against default. The manner and method of such re-purchase shall be at the discretion of the purchaser, whose decision shall be final. It shall not be necessary for the purchaser to serve a notice of such re-purchase on the defaulting Contractor. This right shall be without prejudice to the right of the purchaser to recover damages for breach of Contract by the Contractor.

11. EXTENSION OF TIME:

As soon as it is apparent that the Contract dates cannot be adhered to, an application shall be sent by the Contractor to the purchaser. If failure, on the part of the Contractor, to deliver the stores in proper time shall have arisen from any cause which the purchaser may admit as reasonable ground for an extension of the time (and his decision shall be final) he may allow such additional time as he considers it to be justified by circumstances, of the case without prejudice to the purchaser's right to recover liquidated damages under clause 10 thereof.

12. ERECTION OF PLANT & MACHINERY:

Wherever erection of a plant or machinery is the responsibility of the Contractor as per the terms of the Contract and in case the Contractor fails to carry out the erection as and when called upon to do so within the period specified by the purchaser, the purchaser shall have the right to get the erection done through any source of his choice. In such an event, the Contractor shall be liable to bear any additional expenditure that the purchaser is liable to incur towards erection. The Contractor shall, however, not be entitled to any gain due to such an action by the purchaser.

13. PAYMENT:

a. Contractor's bill will be passed for payment only after the stores have been received, inspected and accepted by the Purchaser.

b. In case of AMC/CAMC the payment will be made on pro-rata quarterly basis after satisfactory completion of service for the respective quarter against submission of bills duly certified by Engineer in-charge, ISTRAC and endorsed by their Division Head

14. MODE OF PAYMENT:

Normally payment will be made for the accepted stores within 30 days from the date of receipt of the materials.

15. RECOVERY OF SUM DUE:

Whenever any claim for the payment of, whether liquidated or not, money arising out of or under this Contract against the Contractor, the purchaser shall be entitled to recover such sum by appropriating in part or whole, the security deposited by the Contractor, if a security is taken against the Contract. In the event of the security being insufficient or if no security has been taken from the Contractor, then the balance or the total sum recoverable as the case may be, shall be deducted from any sum then due or which at any time thereafter may become due to the Contractor under this or any other Contract with the purchaser. Should this sum be not sufficient to cover the full amount recoverable, the Contractor shall pay to the purchaser on demand the remaining balance due. Similarly, if the purchaser has or makes any claim, whether liquidated or not, against the

Contractor under any other Contract with the purchaser, the payment of all moneys payable under the Contract to the Contractor including the security deposit shall be withheld till such claims of the purchaser are finally adjudicated upon and paid by the Contractor.

16. INDEMNITY:

The Contractor shall warrant and be deemed to have warranted that all stores supplied against this Contract are free and clean of infringement of any Patent, Copyright or Trademark, and shall at all times indemnify the purchaser against all claims which may be made in respect of the stores for infringement of any right protected by Patent Registration of design or Trade mark and shall take all risk of accidents or damage which may cause a failure of the supply from whatever cause arising and the entire responsibility for sufficiency of all means used by him for the fulfilment of the contract.

17. ARBITRATION:

In the event of any question, dispute or difference arising under these conditions or any conditions contained in the Purchase Order or in connection with this Contract (except as to any matter the decision of which is specially provided for by these conditions), the same shall be referred to the sole arbitration of the Head of the Purchase office or some other person appointed by him. It will be no objection that the arbitrator is a Government servant, that he had to deal with matter to which the Contract relates or that in the course of his duties as Government servant he has expressed views on all or any other matters in dispute or difference. The award of the arbitrator shall be final and binding on the parties of this Contract.

If the arbitrator be the Head of the Centre/Unit –

(i) In the event of his being transferred or vacating his office by resignation or otherwise, it shall be lawful for his successor-in office either to proceed with reference himself, or to appoint another person as arbitrator, or

(ii) In the event of his being unwilling or unable to act for any reason, it shall be lawful for the Head of the Centre/Unit to appoint another person as arbitrator.

If the arbitrator be a person appointed by the Head of the Purchase Office –In the event of his dying, neglecting or refusing to act or resigning or being unable to act, for any reason, it shall be lawful for the Head of the Centre/Unit either to proceed with the reference himself or appoint another person as arbitrator in place of the outgoing arbitrator.

Subject as aforesaid the Arbitration & Conciliation Act 1996 and the rules thereunder and any statutory modifications thereof for the time being in force shall be deemed to apply to the arbitration proceedings under this Clause. The Arbitrator shall have the power to extend with the consent of the purchaser and the Contractor the time for making and publishing the award. The venue of arbitration shall be the place as purchaser in his absolute discretion may determine. Work under the Contract shall, if reasonably possible, continue during arbitration proceedings.

In the event of any dispute or difference relating to the interpretation and application for the provisions of the Contracts, such dispute or difference shall be referred by either party to Arbitration of one of the Arbitrations in the Department of Public Enterprises. The Arbitration Act 1996 shall not be applicable to arbitration under this clause. The award of the Arbitrator shall be binding upon the parties to the dispute provided however any party aggrieved by such award may make a further reference for setting aside or revision of the award to the Law Secretary, Department of Legal Affairs, Ministry of Law & Justice, Govt. of India. The parties to the dispute will share equally, the cost of arbitration as intimated by Arbitrator.

18. COUNTER TERMS AND CONDITION OF SUPPLIERS:

Where counter terms and conditions printed or cyclostyled conditions have been offered by the supplier, the same shall not be deemed to have been accepted by the Purchaser, unless specific written acceptance thereof is obtained.

19. SECURITY FOR PURCHASE OF MATERIALS:

Successful tenderer will have to furnish in the form of a bank guarantee or any other form as called for by the purchaser towards adequate security for the materials and properties provided by the Purchaser for the due execution of the Contract.

20. Bank Guarantee towards Free Issue Materials (FIM):

The successful Tenderers shall furnish Bank Guarantee (BG) towards the cost of Free Issue Materials issued by Purchaser towards adequate Security for the FIM for the execution of the Contract. The BG is to be kept valid till supply and acceptance of the final product.

21. Earnest Money Deposit/Bid Security:

a. The Tender should be accompanied with an Earnest Money Deposit for a prescribed amount wherever called for in the Notice Inviting Tender [NIT]. Foreign vendors, registered vendors or vendors who have already applied for renewal of registration, Central PSUs/ PSEs/ Autonomous Bodies, Micro and Small Enterprises, KVIC, National Small Industries Corporation, etc., are exempted from the payment of EMD.

b. In case, the vendors are falling under the category of MSME, registered under NSIC and would like to avail exemptions, their quotations should be accompanied with necessary registration certificate with declaration to consider their offer. Quotation received without such declaration and valid registration certificate will not be considered for exemptions under Public Procurement Policy.

22. Risk Purchase:

In case Contractor fails to deliver and install the Stores/Equipment or any part thereof, within the period fixed for such delivery and installation or at any time repudiates the Contract before expiry of such period, the purchaser is entitled to terminate or cancel the Contract and to repurchase the stores not delivered at the risk and cost of the contractor and the contractor shall be liable for any loss which the Purchaser may sustain on that account limited to the contract value.

23. Parallel Contract:

ISTRAC reserves the right to enter into Parallel Contract/s with one or more Contractors.

INSTRUCTIONS TO TENDERERS AND TERMS AND CONDITIONS OF TENDERS FOR IMPORTED STORES ITEMS:

1.ISRO Telemetry Tracking and Command Network [ISTRAC] has implemented e-tender system for ONLINE tenders. ISTRAC invites offers through e-tender portal <https://e-procure.isro.gov.in> for the supply of items. The suppliers need to get enrolled in the e-tender portal to access tender and submit their offer online. Vendors need to have Digital Signature Certificate as detailed on our e-portal and corporate e-mail ID to register on the above portal. Only online tenders will be accepted. No Manual/Postal/courier/e-mail/Fax offers will be entertained. No Manual tender document will be issued by ISTRAC. Suppliers are requested to note and comply with the Instructions to tenderers for online submission of tenders through E-Procurement System indicated in the document "Instructions-for-Online-Submission-of tenders-EGPS.pdf".

2.Suppliers are requested to submit their offer/quotation online complete in all respects with technical specifications, including pamphlets and catalogues.

3.In case of two-part tenders, parties shall submit their offers as follows:-

a) Part-I – Technical Bid:

Only Technical details shall be mentioned in this bid and shall not upload any details of price along with the technical bid. Vendor specified terms column is to be filled with out indicating any price details. If any Price detail is mentioned in the Technical Bid such offer shall be rejected.

b) Part-II – Price Bid:

Only the price details along with applicable taxes and other cost if any shall be indicated in the price bid form.

4. The offer shall contain the following information as applicable. A Proforma Invoice may also be attached containing the following information :

a)The FOB/FCA value, the C & F value for import by Sea freight / Air freight up to and for air parcel post up toshould be separately indicated.

b)Agency Commission: The amount of commission included in the price and payable to the Indian Agent of the Contractor shall be paid directly to the Indian Agent by the Purchaser in equivalent Indian Rupees on the basis of an Invoice from him applying T.T. buying rate of exchange ruling on the date of placement of the Purchase Order and which shall not be subject to any further exchange variations. This payment will be released to the Indian Agent immediately after Customs clearance of the goods in India.

c)The Contractor shall invoice only for the net amount payable to him, after deducting the amount of Agency Commission included in the invoice which will be paid to the Indian Agent directly by the Purchaser. However, the Contractor's invoice should separately reflect the amount of commission payable to his Indian Agent.

d)The earliest delivery period and country of origin of the Stores.

e)Banker's name, address, telephone/fax Nos. & e-Mail ID of the Contractor.

f)The approximate net and gross weight and dimensions of packages /cases.

g)Recommended spares for satisfactory operation for a minimum period of one year.

h)Details of any technical service, if required for erection, assembly, commissioning and demonstration.

5. The FOB/FCA and C & F prices quoted should be inclusive of all taxes, levies, duties arising in the tenderer's country.

6.The offer should be valid for a minimum period of 120 days from the due date of opening of the tender.

7.Samples, if called for, should be sent free of all charges.

8.Offers made by Indian Agent on behalf of their Principals, should be supported by the proforma invoice of their Principals.

9. The details of Import License will be furnished in the purchase order.

10.The authority of person signing the tender, if called for, shall be produced.

11.Instructions / Operation Manual containing all assembly details including wiring diagrams should be attached through online mode only. All documents /correspondence should be in English language only.

12.The Purchaser reserves the right to accept or reject the lowest or any offer in whole or part without assigning any reason.

13.It is expressly agreed that the acceptance of the Stores Contracted for is subject to final approval in writing by the Purchaser.

14.a)Part shipment is not allowed unless specifically agreed to by us.

b)As far as possible stores should be despatched by Indian Flag Vessels /Air India through any Agency nominated by us.

15. Inspection / Test Certificate should be provided for the goods after testing it thoroughly at the Contractor's works. If any Inspection by Lloyds or any other testing agency is considered necessary, it shall be arranged by Contractors.

16. Where erection or assembly or commissioning is a part of the Contract, it should be done immediately on notification. The Contractor shall be responsible for any loss/damage sustained due to delay in fulfilling this responsibility.

17. For items having shelf life, those with maximum shelf life should be supplied if order is placed.

18. The goods / material offered should be strictly as per our specifications. Change(s) in specifications, if any, should be clearly indicated by the supplier in his quotation. The supplier should also indicate make/type No. of the materials / equipments offered.

19. Indian Agents while quoting on behalf of their principals shall attach necessary authorization letter from their Principals along with the bid.

20. In a tender, either the Indian Agent on behalf of the Principal/OEM or Principal/ OEM itself can bid but both cannot bid simultaneously for the same item/product in the same tender.

21. If an Indian agent submits bid on behalf of the Principal/OEM, the same Indian agent shall not submit a bid on behalf of another Principal/OEM in the same tender for the same item/product.

22. If a firm quotes 'Nil' charges/consideration, the bid shall be treated as unresponsive and will not be considered;

23. The drawings, specifications, end-use, etc., given by ISTRAC along with the tender enquiry, are confidential and shall not be disclosed to any third party.

TERMS AND CONDITIONS OF THE TENDER:

1. DEFINITIONS:

(a) The term 'Purchaser' shall mean the President of India or his successor or assignees.

(b) The term 'Contractor' shall mean, the person, firm or company with whom or with which the order for the supply of stores is placed and shall be deemed to include the Contractor's Successors, representatives, heirs, executors and administrators unless excluded by the Contract.

(c) The term 'Purchase Order' shall mean the communication signed on behalf of the Purchaser by an officer duly authorised intimating the acceptance on behalf of the Purchaser on the terms and conditions mentioned or referred to in the said communication accepting the Tender or offer of the Contractor for supply of stores of plant, machinery or equipment of part thereof.

(d) The term 'Stores' shall mean what the Contractor agrees to supply under the Contract as specified in the Purchase Order.

2. PRICES:

Tenders offering firm prices will be preferred. Where a price variation clause is insisted upon by a tenderer, quotations with a reasonable ceiling should be submitted. Such offers should invariably be supported by the base price taken into account at the time of tendering and also the formula for any such variations.

3. TERMS OF PAYMENT:

3.1 Being a Department of the Government of India, the normal terms of payment are by Sight Draft. However other terms of payment like establishment of Letter of Credit may be considered by the Purchaser on such terms and conditions as may be agreed upon.

3.2 The Sight Draft / Letter of Credit will be operative on presentation of the undermentioned documents:

a) Original Bill of Lading / Airway Bill

b) Commercially certified invoices describing the stores delivered, quantity, unit rate and their total value, in triplicate. The invoice should indicate the discounts, if any, and Agency Commission separately.

c) Packing List showing individual dimensions and weight of packages.

d) Country of Origin Certificate in duplicate.

e) Test Certificate.

f) Declaration by the Seller that the contents in each case are not less than those entered in the invoices and the quality of the Stores are guaranteed as per the specifications asked for by the Purchaser.

g) Warrantee and guarantee Certificate/s vide Clause 20 hereinbelow

4. IMPORT LICENCE:

Reference to Import License No. & date and Contract number & date shall be prominently indicated in all the documents vide para 3.2

5. DEMURRAGE:

Supplier shall bear demurrage charges, if any, incurred by the purchaser due to delayed presentation of shipping documents as prescribed in para 3.2 to the bankers within a reasonable time (say within 10-12 days) from the date of bill of lading for sea consignments and within 3-4 days from the date of Air Way Bill for air consignments.

6. ADDRESS OF INDIAN AGENTS:

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7. GUARANTEED TIME DELIVERY:

The time for and the date of delivery stipulated in the Purchase Order shall be deemed to be the essence of the Contract. Delivery must be completed within the date specified therein.

8. INSPECTION AND ACCEPTANCE TEST:

8.1 The Purchaser's representatives shall also be entitled at all reasonable times during manufacture to inspect, examine and test on the Contractor's premises the material and workmanship of all stores to be supplied under this Contract and if part of the said stores is being manufactured on other premises, the Contractor shall obtain for the purchaser's representative permission to inspect, examine and test as if the equipment were being manufactured on the Contractor's premises. Such inspection, examination and testing shall not release the Contractor from the obligations under this Contract.

8.2 For tests on the premises of the Contractor or of any of his sub-Contractors, the Contractor shall provide free of cost assistance, labour, material, electricity, fuel and instruments as may be required or as may be reasonably needed by the purchaser's representative to carry out the test efficiently.

8.3 When the stores have passed the specified test, the purchaser's representative shall furnish a certificate to the effect in writing to the Contractor. The Contractor shall provide copies of the test/s certificates to the purchaser as may be required.

9. MODE OF DESPATCH:

Generally, stores should be despatched through Indian Flagged Vessel / Air India or through any other Agency nominated by the purchaser. A copy of the invoice and packing list should invariably be kept inside each of the packages.

10.PORT OF ENTRY:

Thiruvananthapuram/Chennai/Mumbai/Hyderabad/Bangalore/.....

11.CONSIGNEE:

Purchase & Stores Officer(Stores)

Plot No. 12 & 13, III Main, II Phase,

Peenya industrial Area,

Bangalore-560058

12.SHIPPING MARKS.

The mark on the shipping documents such as invoice, bill of lading and on the packages should be as follow:

PURCHASE ORDER NO.

DATED

GOVERN MENT OF INDIA

DEPARTMENT OF SPACE

ISTRAC/ISRO

Plot No. 12 & 13, III Main, II Phase,

Peenya industrial Area

Bangalore-560058

Destination: &

Port of Entry:

13.INSURANCE OF THE STORES:

The necessity or otherwise of insurance will be as indicated in the PurchaseOrder.

14.CONTRACTOR'S DEFAULT LIABILITY:

14.1The purchaser may upon written notice of default to the Contractor terminate the Contract in whole or in part in circumstances detailed hereunder:

a) If in the judgement of the Purchaser the Contractor fails to make delivery of Stores within the time specified in the Contract/agreement or within the period for which extension has been granted by the Purchaser to the Contractor.

b) If in the judgment of the Purchaser the Contractor fails to comply with any of the other provisions of this Contract.

15. In the event the Purchaser terminates the Contract in whole or in part as provided in Clause 14 the Purchaser reserves the right to Purchase, upon such terms and in such a manner as he may deem appropriate, stores similar to that terminated and the Contractor shall be liable to the Purchaser for any additional costs for such similar stores and/or for liquidated damages for delay as defined in Clause 19 until such reasonable time as may be required for the final supply of stores.

15.1 If this Contract is terminated as provided in Clause 14 the Purchaser in addition to any other rights provided in this Article, may require the Contractor to transfer title and deliver to the Purchaser under any of the following clauses in the manner and as directed by the Purchaser:

a) Any completed stores.

b) Such partially completed stores, drawing, information and Contract rights (hereinafter called manufacturing material) as the Contractor has specifically produced or acquired for the performance of the Contract as terminated. The Purchaser shall pay to the Contractor the Contract price for completed stores delivered to and accepted, by the purchaser and for manufacturing material delivered and accepted.

15.2 In the event the Purchaser does not terminate the Contract as provided in Clause 14, the Contractor shall continue the performance of the Contract in which case he shall be liable to the purchaser for liquidated damages for delays set out in Clause 19 until the stores are accepted.

16. REPLACEMENT:

If the stores or any portion thereof is damaged or lost during transit, the Purchaser shall give notice to the Contractor setting forth particulars of such stores damaged or lost during transit. The replacement of such stores shall be effected by the Contractor within a reasonable time to avoid unnecessary delay in the intended usage of the Stores. In case the purchaser agrees, the price towards replacement items shall be paid by the purchaser on the basis of original price quoted in the tender or as reasonably worked out from the tender.

17. REJECTION :

In the event that any of the stores supplied by the Contractor is found defective in material or workmanship or otherwise not in conformity with the requirements of the Contract specifications, the purchaser shall either reject the stores or request the Contractor, in writing, to rectify the same. The Contractor, on receipt of such notification, shall either rectify or replace the defective stores free of cost to the purchaser. If the Contractor fails to do so, the purchaser may at his option either –

a) replace or rectify such defective stores and recover the extra cost so involved from the Contractor, or

b) terminate the Contract for default as provided under clause 14 above, or

c) acquire the defective stores at a reduced price considered equitable under the circumstances. The provision of this article shall not prejudice the Purchaser's rights under clause 19.

18. EXTENSION OF TIME:

If the completion of supply of stores is delayed due to reason of force majeure such as acts of god, acts of public enemy, acts of Government, fires, floods, epidemics, quarantine restriction, strikes, freight embargoes, etc., the Contractor shall give notice within 15 days to the purchaser in writing of his claim for an extension of time. The purchaser on receipt of such notice after verification, if necessary, may agree to extend the Contract delivery date as may be reasonable but without prejudice to other terms and conditions of the Contract.

19. DELAY IN COMPLETION / LIQUIDATED DAMAGES:

If the Contractor fails to deliver the stores within the time specified in the Contract or any extension thereof, the purchaser shall recover from the Contractor as liquidated damages a sum of one-half of one percent (0.5 percent) of the Contract price of the undelivered stores for each calendar week of delay. The total liquidated damages shall not exceed ten percent (10 percent) of the Contract price of the unit or units so delayed. Stores will be deemed to have been delivered only when all their component parts are also delivered. If certain components are not delivered in time, the stores will be considered as delayed until such time as the missing parts are delivered.

20. GUARANTEE & REPLACEMENT:

a) The Contractor shall guarantee that the stores supplied shall comply fully with the specifications laid down for material, workmanship and performance.

b) For a period of twelve months after the acceptance of the stores, if any defects are discovered therein or any defects therein are found to have developed under proper use arising from faulty

materials, design or workmanship, the Contractor shall remedy such defects at his own cost provided he is called upon to do so within a period of 14 months from the date of acceptance thereof by the Purchaser who shall state in writing in what respect the stores or any parts thereof are faulty.

c) If in the opinion of the purchaser it becomes necessary to replace or renew any defective stores, such replacements or renewals shall be made by the Contractor free of all costs to the purchaser provided the notice informing the Contractor of the defect is given by the purchaser in this regard within the said period of 14 months from the date of acceptance thereof.

d) Should the Contractor fail to rectify the defects, the purchaser shall have the right to reject or repair or replace at the cost of the Contractor the whole or any portion of the defective stores.

e) The decision of the Purchaser, notwithstanding any prior approval or acceptance or inspection thereof on behalf of the purchaser, as to whether or not the stores supplied by the Contractor are defective or any defects have developed within the said period of 12 months or as to whether the nature of the defects requires renewal or replacement shall be final, conclusive and binding on the Contractor.

f) PERFORMANCE BANK GUARANTEE:

To fulfill guarantee conditions outlined in Clause 20 (a) to (e) above, the Contractor shall, at the option of the purchaser, furnish a Bank Guarantee (as prescribed by the purchaser - Bank Guarantee format enclosed) from a Bank approved by the purchaser for an amount equivalent to 10% of the value of the Contract along with first shipment documents. On the performance and completion of the Contract in all respects, the Bank Guarantee will be returned to the Contractor without any interest.

g) All the replacement stores shall also be guaranteed for a period of 12 months from the date of arrival of stores at purchaser's site.

h) Even while the 12 months guarantee applies to all stores, in case where a greater period is called for by our specifications, then such a specification shall apply, and in such cases, the period of 14 months referred to in Clause 20 (b) and (c) shall be asked for guarantee period plus two months.

21. REQUIREMENT OF ADDITIONAL NUMBERS OF THE STORES/SPARE PARTS ORDERED:

The Contractor shall also undertake the supply of additional number of items covered by the order as considered necessary by the purchaser at a later date, the actual price to be paid shall be mutually agreed to after negotiations.

22. PACKING:

a) The Contractor wherever applicable shall pack and crate all stores for sea /air shipment as applicable in a manner suitable for export to a tropical humid climate, in accordance with internationally accepted export practices and in such a manner so as to protect it from damage and deterioration in transit by road, rail or sea for space qualified stores. The Contractor shall be held responsible for all damages due to improper packing.

b) The Contractor shall ensure that each box / unit of shipment is legible and properly marked for correct identification. The failure to comply with this requirement shall make the Contractor liable for additional expenses involved.

c) The Contractor shall notify the purchaser of the date of shipment from the port of embarkation as well as the expected date of arrival of such shipment at the designated port of arrival.

d) The Contractor shall give complete shipment information concerning the weight, size, content of each packages, etc.

e) Transshipment of equipment shall not be permitted except with the written permission of the purchaser.

f) Apart from the despatch documents negotiated through Bank, the following documents shall also be airmailed to the purchaser within 7 days from the date of shipment by sea and within 3 days in case of air-consignments:

a) Commercial Bill of Lading / Air Way Bill / Post parcel Receipt. (Two non-negotiable copies)

b) Invoice (3 copies)

c) Packing List (3 copies)

d) Test Certificate (3 copies)

e) Certificate of Origin.

The Contractor shall also ensure that one copy of the packing list is enclosed in each case.

23. ARBITRATION:

If at any time any question, dispute or difference whatsoever shall arise between the purchaser and the Contractor upon or in connection with this Contract, either party may forthwith give to the other notice in writing of the existence of such question, dispute or difference and the same shall be referred to the adjudication of two arbitrators, one to be nominated by purchaser, other by a Contractor and in the event of any difference of opinion, the arbitrators will refer the matter to the umpire. The arbitration shall be conducted in accordance with the rules and procedure for arbitration of the International Chamber of Commerce at Paris. The expenses of the arbitrators and umpire shall be paid as may be determined by them. However, the venue of such arbitration should be in India.

24. LANGUAGE AND MEASURES:

All documents pertaining to the Contract including specification, schedule, notice, correspondence, operating and maintenance instructions, drawings or any other writings shall be written in English language. The metric system of measurement shall be used exclusively in the Contract.

25. INDEMNITY:

The Contractor shall warrant and be deemed to have warranted that all Stores supplied against this Contract are free and clean of infringement of any patent, copyright or trade mark and shall at all times indemnify the purchaser against all claims which may be made in respect of stores for infringement of any right protected by Patent, Registration of design or Trade Mark, and shall take all risk of accident or damage which may cause a failure of the supply from whatever cause arising and the entire responsibility for the sufficiency of all the means used by him for the fulfillment of the Contract.

26. COUNTER TERMS AND CONDITIONS OF SUPPLIERS:

Where counter terms and conditions/printed or cyclostyled conditions have been offered by the supplier, the same shall not be deemed to have been accepted by the purchaser unless specific written acceptance thereof is obtained.

27. SECURITY INTEREST:

On each item to be delivered under this Contract, including an item of work in progress in respect of which payments have been made in accordance with the terms of the Contract, purchaser shall have a security interest in such items which shall be deemed to be released only at the time when the applicable deliverable item is finally accepted and delivered to the purchaser in accordance with the terms of the Contract. Such security interest of the purchaser shall constitute a prior charge as against any other charge or interest created in respect of such items by any entity.

28. BANK CHARGES:

While the purchaser shall bear the bank charge payable to his Bankers (State Bank of India), the Contractor shall bear the Bank charges payable to his Bankers including the cheques towards advising amendment commissions.

29. TRAINING:

The Contractor shall, if required by the purchaser, provide facilities for the practical training of Purchaser's engineering / technical personnel from India and for their active association on the manufacturing processes throughout the manufacturing period of the Contract / stores, number of such personnel to be mutually agreed upon.

30. APPLICABLE LAW:

The Contract shall be interpreted, construed and governed by the laws of India.

31. Bank Guarantee towards Free Issue Materials (FIM):

The successful Tenderers shall furnish Bank Guarantee (BG) towards the cost of Free Issue Materials issued by Purchaser towards adequate Security for the FIM for the execution of the Contract. The BG is to be kept valid till supply and acceptance of the final product.

32. Customs Duty:

ISTRAC is eligible for concessional Customs duty @ 5.15% vide Notification No.51/96-Cus dated 23.07.1996 as amended vide Customs Notification No. 24/2007 dated 01.03.2007. The necessary Customs Duty Exemption Certification [CDEC] shall be provided by ISTRAC for Imported Items. Tenderers are requested to take note of this aspect while submitting the offer wherever applicable.

33. High Sea Sale:

Tenderers submitting offer[s] against High Sea Sale Trade, the price of such offers be in Indian Rupees only and shall be inclusive of Freight and Clearance Charges for delivery up to ISTRAC, Bengaluru. The offers shall be Firm, Fixed Price without any variation in Exchange Conversion Rate whatsoever. No Sales Tax will be applicable for High Sea Sale. Customs Duty Exemption Certificate 51/96 will be provided by ISTRAC. Customs Duty at actuals will be reimbursed against documentary evidence such as Bill of Entry.

34. Earnest Money Deposit/Bid Security:

a. The Tender should be accompanied with an Earnest Money Deposit for a prescribed amount wherever called for in the Notice Inviting Tender [NIT]. Foreign vendors, registered vendors or vendors who have already applied for renewal of registration, Central PSUs/ PSEs/ Autonomous Bodies, Micro and Small Enterprises, KVIC, National Small Industries Corporation, etc., are exempted from the payment of EMD.

b. In case, the vendors are falling under the category of MSME, registered under NSIC and would like to avail exemptions, their quotations should be accompanied with necessary registration certificate with declaration to consider their offer. Quotation received without such declaration and valid registration certificate will not be considered for exemptions under Public Procurement Policy.

35. Risk Purchase:

In case Contractor fails to deliver and install the Stores/Equipment or any part thereof, within the period fixed for such delivery and installation or at any time repudiates the Contract before expiry of such period, the purchaser is entitled to terminate or cancel the Contract and to repurchase the stores not delivered at the risk and cost of the contractor and the contractor shall be liable for any loss which the Purchaser may sustain on that account limited to the contract value.

36. Parallel Contract:

ISTRAC reserves the right to enter into Parallel Contract/s with one or more Contractors.

INSTRUCTIONS TO TENDERERS FOR ONLINE SUBMISSION OF TENDERS THROUGH E-PROCUREMENT

INSTRUCTIONS TO TENDERERS FOR ONLINE SUBMISSION OF TENDERS THROUGH E-PROCUREMENT SYSTEM:

GOVERNMENT OF INDIA

DEPARTMENT OF SPACE

ISRO TELEMETRY TRACKING AND COMMAND NETWORK (ISTRAC)

Plot No. 12 & 13, 3rd Main, 2nd Phase

PEENYA INDUSTRIAL AREA, BANGALORE –560 058

Phone No.: 080-28376383 Fax: 080-28094061 E-mail: purchase@istrac.org

1. Conditions for online submission of tenders:

1.1. It is mandatory for interested parties to register as vendors in our e-procurement portal <https://eprocure.isro.gov.in> for participating in online eProcurement process of ISRO. Only registered vendors can submit their offers online in our eProcurement portal.

1.2. To register as vendors please refer to the help demos listed on the home page of the e-procurement link mentioned above. They may approach help desk (contact details provided on the home page) for any technical help for registration and subsequent process.

1.3. Bidders shall arrange themselves all resources, including Digital signature certificates and Internet Connections at their own cost, for participating in online tendering.

1.4. Vendors can download the tender details and submit their offers online using their vendor accounts (obtained during registration) in our portal. Help demos for tender download and bidding processes are given on home page. 1.5. The tender should be submitted online in the ISTRAC link before the due date and time as specified in the tender schedule in the portal.

1.6. Vendors shall also take note of other Instructions to tenderers indicated in the tender documents.

2. Procedure for seeking clarifications/help for the tender:

2.1. All enquiries regarding the tenders and submission of offers shall be online and only through our eProcurement portal.

2.2. Vendors may approach help desk e-mail id and phone number given on the home page for any technical help (e-mail: support.isro@nextenders.com and Ph: 020-30187500).

3. Procedure for reporting technical issues, if any, in online submission:

3.1. In case bidder encounters any technical snag pertaining to e-procurement system while acting on the tender, computer screen shot of the error message with date & time stamp on the web-browser along with the query shall be e-mailed by the bidder to the help desk (as mentioned above) for problem resolution at least 24 hours before the due date and time of the tender.

3.2. The time taken to ascertain, evaluate and suggest a solution for the problem reported by vendor may vary from case to case. Hence vendors are advised to submit the bid well in advance before closing date and time to avoid last minute issues.

3.3. ISTRAC shall not be responsible for failure of vendors in submitting bids online caused due to technical reasons at vendor end such as network or power failures, computer failure, internet-browser, mistakes / errors in filling the bids on line by vendor etc.

3.4. Queries by vendors on technical problems on the last day of tender will not be binding on ISTRAC/ISRO for resolving/addressing. ISTRAC will not be responsible for non-submission of bids for those cases.

4. Terms & conditions for extension of Tender Due Date:

4.1. The Server Date & Time as appearing on our website <https://eprocure.isro.gov>. in shall only be considered for the cut-off date and time for receipt of tenders.

4.2. Request, if any, for extension of tender due date shall reach ISTRAC at least 4 working days in advance of due date and time for consideration. ISTRAC is not bound by such requests to extend the due date unless it feels necessary.

4.3. The e-procurement system does not permit submission of any offer after closing date and time of the e-tender. Hence, there is no scope for any late or delayed offer in the on-line bidding process. Requests for extension of due date and time citing technical issues in online submission of offers will not be entertained.

4.4. In case there is complete breakdown of eProcurement system on the last day of the tender for any reason then ISTRAC may extend the date for submission after their own assessment.

5. Reworking on Submitted bids:

5.1. Vendors have to note that once rework is initiated the status of the earlier submitted bid becomes Pending till the bidding process is completed once again. During the process of rework earlier submitted bid data becomes invalid and will not be available for opening. If rework is initiated then vendor has to complete the entire process of bid submission once again within the due date and time for a valid bid submission.

5.2. ISTRAC will not be responsible for non submission of bids resulting due to failure of vendor to once again complete the process of bid submission before due date after reworking of submitted bid is initiated.

5.3. Please note that unsolicited clarifications / changes / modifications sought by the vendors after submitting their bids will not be considered.

6. Procedure for filling offers online:

6.1. Vendors may please note that in case of two-part tender, the price details shall be mentioned only in the price-bid template. If the price details either in part or full are indicated in the technical bid, the bid will be disqualified.

6.2. Vendors may note that in e-procurement system submission of bid is a two-step process. After submission of their bids, vendors have to wait for bid sealing by ISTRAC purchase officer. Following that vendors have to submit open authorization in the e-procurement system to enable the purchase officer to open the bid. If open authorization is not completed by the vendor then purchase officer will not be able to open the bid and the bid becomes invalid.

7. Using Digital Certificates for online submission:

7.1. Vendors may note that digital keys of class-III USB tokens, which supports both digital signing and encryption are to be used for bidding in ISTRAC e-procurement system.

7.2. Vendors may note that they have to use the same digital key with which they submitted the bid to give open authorization. If vendors use different key for open authorization, the system will not accept the open authorization and the bid becomes invalid.

7.3. In case the digital key which is used during bid submission expires before giving open authorization, then vendor has to first login with the new key and use the expired key for completing open authorization process for the bid.

8. Uploading files in to E-procurement portal:

8.1. Vendors may please note that the maximum file size that can be uploaded per attachment in e-procurement system is 4 MB. If the document is more than 4 MB then the document is to be split into multiple documents of size less than 4 MB and upload into attachments. Literature / Technical data should accompany the quotation.

8.2. Similarly, if the number of files to be uploaded is more than the number of attachments allowed in the tender then group the files into folders such that the number of folders is less than the number of

attachments. Further zip/archive the folders and upload as attachments. However, the attachment size should still be less than 4 MB.

8.3.Vendors may note that documents including Literature / Technical data are to be uploaded through e-procurement system only.

Bid Templates

Document Solicited from Vendor

Attachment 1:

Attachment 2:

LV Panel specifications for both the panels

Item Specifications

Sl. No	Specifications	Compliance (Yes /No)	Offered Specifications	Remarks
1	DESIGN AND CONSTRUCTION: DESIGN REQUIREMENTS: The L.V. panels shall be suitable for operation on 415 volts, 3 phase, 50 HZ system to withstand a short circuit level of 35 KA RMS symmetrical and			

	<p>for one second 73.5 KA peak . The panel builder shall be in possession of necessary CPRI type test certificate for short circuit level of 50 KA RMS symmetrical and for one second 105 KA peak. Same shall be furnished on demand.The LV. panels shall be designed for operation in high ambient temperature up to 55°.C and high relative humidity upto 95% and tropical atmospheric conditions. Means shall be provided to facilitate ease of inspection, cleaning and repairs.</p>			
2	<p>CONSTRUCTIONAL REQUIREMENTS: The LV. panels shall be of: i)Metal clad, cubicle, indoor, free standing type and compartment arrangementii) Made up of the requisite vertical sections, which when</p>			

	<p>coupled together shall form continuous dead front switch board.iii)Dust and damp protected, the degree of protection shall be IP-42 as specified in IS-2147.iv)Readily extendable on both sides by the addition of vertical sections after removal of the end covers.v)Single front construction (unless specifically accepted by Dept. otherwise) with the Air circuit breaker feeders suitable for operation from the front of the panel. The LV. panels shall have the feeder ratings as indicated in the schedule of quantities and constructed only of materials capable of withstanding the mechanical, electrical and thermal stresses as well as the effects of humidity, which are likely to be encountered in normal</p>			
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	service.			
3	<p>VERTICAL SECTIONS:Each vertical section shall complete a front framed structure rolled / folded sheet steel channel section of minimum 2 mm thickness rigidly bolted together. This structure shall house the components contributing the major weight of the equipment, such as ACB, main horizontal bus bars, vertical risers and other front mounted accessories. The structure shall be mounted on a rigid base frame of ISMC 100 channel. The design shall ensure that the weight of the components is adequately supported without deformation or loss of alignment during transit or during operation.Suitable cable chamber housing the cable end connections, power</p>			

	<p>and control cable terminations shall be provided. The design shall ensure generous availability of space for ease of installation and maintenance of cabling and adequate safety for working in one vertical section without coming into accidental contact with live parts in the adjacent section. A cover plate at the top of the vertical section shall be provided with necessary ventilating arrangements. Any aperture for ventilation shall be covered with a perforated sheet having less than 1 mm diameter perforations to prevent entry of vermin.</p>			
4	<p>SHEET STEEL CUBICLE: The sheet steel cubicle shall be designed in fully segregated multi-tier formation. Each cubicle</p>			

	<p>shall have hinged front access door with easy operating fasteners. All doors and covers shall be heavily gasketed to make the compartment dust tight. Each cubicle shall have a covering at the bottom to make a dust and vermin proof construction. Door hinges shall be of concealed type. The cubicle shall be of minimum 2mm thick sheet steel. Sheet steel shrouds and partitions shall be of minimum 1.6mm thickness. During fabrication, all sheet steel works forming the exterior of switch boards shall be smoothly finished, leveled and free from flaws. The corners shall be rounded and the overlap of the sheet steel and skeleton structure shall be suitably made such that no gaps, where in dust can accumulate, are left on the</p>			
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	<p>exterior sides. The apparatus and circuits in the LV. panels shall be so arranged as to facilitate their operation and maintenance and at the same time to ensure the necessary degree of safety. Apparatus forming part of the LV. panels and Bus Duct shall have the following minimum clearances. i) between phases ---25 mm ii) between phases and neutral---25 mm iii) between phases and earth---25 mm iv) between neutral and earth---19 mm If for any technical reason, the above clearances are not available, suitable insulation shall be provided. Clearance shall be maintained during normal service conditions. Creepage distances shall comply with those specified in relevant</p>			
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	<p>standards. All insulating materials used in the construction of the equipment shall be non-hygroscopic, duly treated to withstand the effect of high humidity, high temperature and tropical ambient service conditions. Metallic/insulated barriers shall be provided within vertical sections and between adjacent sections to ensure prevention of accidental contact with:</p> <p>i) Main bus bars and vertical risers during operation, inspection or maintenance of functional units and front mounted accessories.</p> <p>ii) Cable terminations of one functional unit, when working on those of adjacent unit / units. All doors/covers providing access to live power equipment/circuits shall be provided With tool or</p>			
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	key operated fasteners to prevent unauthorized access.Provisions shall be made for permanently earthing the frames and other metal parts of the switch gear by two independent connections.			
5	METAL TREATMENT AND FINISH: All steel works used in the construction of the switch boards and Bus Duct shall have undergone a suitable rigorous metal treatment seven tank process so as to remove oxide scales and rust formation and to facilitate a durable coating of the paint on the metal surfaces and to prevent spreading of rust, even in the event of paint film being mechanically damaged.Powder coated paint as a finishing coat to the shade as specified in the purchase order shall be given. The thickness of			

	<p>paint shall not be less than 50 micron. The interiors of panels shall be painted with fire retardant paint.</p>			
6	<p>BUS BARS: The bus bars shall be housed in non-segregated sheet steel compartments in the cubicle at convenient locations with provision for access to the bus bars from the front of the panel. The bus bar chamber and the breaker cubicle shall have inter-panel fire-barriers. The bus bars shall be air insulated and made of high conductivity, high strength Electrolytic aluminium complying with the requirements of IS 5082 as indicated in the schedule of quantities. The bus bar shall be suitably braced with non- hygroscopic supports to provide a through fault withstand capacity of 35kA RMS</p>			

	<p>symmetrical for one second and a peak short circuit withstand capacity of 73.5kA. The neutral as well as the earth bus shall be capable of withstanding the above fault level. Fire retardant SMC/DMC fillings for openings around the bus bar near the sectional barriers shall be provided. Large clearance and creepage distances shall be provided on the bus bar system to minimize the possibility of a fault. High tensile bolts, nuts and spring washers shall be provided at all bus bar joints. The main phase bus bars shall have continuous current rating through out the length of each power control centre and the neutral bus bars shall be full rated as the phase busbar or shall have a continuous rating of atleast 50% of the phase bus bars as specified in the</p>			
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	<p>BOQ.The continuous rating of busbar shall be 125% of the rated current. Maximum temperature of the bus and the connectors shall not exceed 85°C. The bus bars shall be of liberal design for the required current rating.Connections from the main bus bars to functional circuits shall be arranged and supported so as to withstand without any damage or deformation, the thermal and dynamic stresses due to short circuit currents.All bus bars and tapping's shall be provided with heat shrinkable type colour coded sleeves for phase identification. All joints / tapping points of the buses shall be suitably shrouded to prevent accidental contact.The bus bars shall be of liberal design for the required current rating. However</p>			
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	<p>the cross sectional area of the bus for various ratings shall not be less than as specified below. Bus bar</p> <p>Total cross sectional area per phase rating in sq.mmin Amps</p> <p>Aluminum bus</p> <table border="0"> <tr> <td>Copper bus</td> <td>100</td> <td>150</td> </tr> <tr> <td></td> <td>105</td> <td>200</td> </tr> <tr> <td></td> <td>210</td> <td>300</td> </tr> <tr> <td></td> <td>315</td> <td>450</td> </tr> <tr> <td></td> <td>420</td> <td>600</td> </tr> <tr> <td></td> <td>630</td> <td>1000</td> </tr> <tr> <td></td> <td>700</td> <td>800</td> </tr> <tr> <td></td> <td>1100</td> <td>770</td> </tr> <tr> <td></td> <td>1300</td> <td>910</td> </tr> <tr> <td></td> <td>1500</td> <td>1100</td> </tr> <tr> <td></td> <td>2000</td> <td>1500</td> </tr> <tr> <td></td> <td>2500</td> <td>1850</td> </tr> <tr> <td></td> <td>3000</td> <td>2500</td> </tr> <tr> <td></td> <td>3500</td> <td>2750</td> </tr> <tr> <td></td> <td>4000</td> <td>3700</td> </tr> </table> <p>The main phase bus bars (both horizontal and vertical) shall have continuous current rating throughout the length of power supply panel and the neutral bus bars shall have a continuous rating of 100% of the phase bus</p>	Copper bus	100	150		105	200		210	300		315	450		420	600		630	1000		700	800		1100	770		1300	910		1500	1100		2000	1500		2500	1850		3000	2500		3500	2750		4000	3700			
Copper bus	100	150																																															
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	3500	2750																																															
	4000	3700																																															

	bars for UPS panels and 50% rating for normal power supply panels. Connections from the main bus bars to the functional circuits shall be arranged and supported so as to withstand without any damage or deformation, the thermal and dynamic stresses due to short circuit currents. All bus bars and tapping shall be provided with colour coded sleeves for phase identification. All joints/tapping points of the buses shall be suitably shrouded to prevent accidental contact.			
7	SWITCHGEARS: Please refer the detailed specification for COSs, MCCBs, MCBs and other switchgears enclosed herewith.			
8	CURRENT TRANSFORMERS: Current			

	transformers shall comply with the requirements of relevant latest amended IS. They shall have ratios, outputs and accuracy as specified in the schedule of quantities.			
9	INDICATING METERS: All indicating instruments shall be of flush mounted digital multifunction type compatible for SCADA.			
10	INDICATING LAMPS: Indicating lamps shall be of LED type only, provided with translucent lamp covers. Lenses shall be easily replaceable from the front. LED module shall be suitable for direct operation on 415V/230V 50 Hz AC.			
11	CABLE TERMINATIONS: Cable entries (knock outs) and terminals shall be provided in the switch board to suit the number, type and size of aluminium			

	<p>conductor power cables including provision for future additional cable entries. Necessary numbers of terminal blocks with sufficient ways for termination of the cables shall be provided in the cable alleys. The outgoing terminals of all switchgear shall be conveniently extended up to cable alley and facilitate easy termination of all cables as indicated by Dept. after award of order. Provision shall be made for bottom entry of cables as required. Generous size of cabling chambers shall be provided with the position of cable glands and terminals such that cables can be easily and safely terminated. Barriers or shrouds shall be provided to permit safe working at the terminals of one circuit without accidentally touching that</p>			
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	<p>of another live circuit. Cable risers shall be adequately supported to withstand the effects of rated short circuit currents without damage and without causing secondary faults.</p>			
12	<p>CONTROL WIRING: All control wiring shall be carried out with 1100 V grade single core PVC cable conforming to relevant IS having stranded copper conductors of minimum 2.5 sq.mm section. Wiring shall be neatly bunched, adequately supported and properly routed to allow easy access and maintenance. Wires shall be identified by numbered ferrules at each end. The ferrules shall be of the ring type and of non-deteriorating material. They shall be firmly located on each wire so as</p>			

	to prevent free movement.All control circuit fuses shall be mounted in front of the panel and shall be easily accessible.			
13	<p>TERMINAL BLOCKS /LABELS / DANGER BOARDS: Terminal blocks shall be of 500 volts grade of the stud type. Insulating barriers shall be provided between adjacent terminals.Terminal blocks shall be shrouded. Provisions shall be made for label inscriptions. Labels shall be of anodized aluminium, with white engraving on black background. he nomenclature for engraving on the label plates shall be furnished by Department. They shall be properly secured with fasteners. Danger plates of size and descriptions as</p>			

	recommended in the relevant IS, shall be provided on the Panels.			
14	<p>TESTS TO BE DONE AT FACTORY/WORKS PRIOR TO DESPATCH</p> <p>Once the panel shell is fabricated and kept ready for seven tank metal treatment processes, the contractor shall inform the status to Department. In case the Department desires, an inspection will be arranged for checking the dimensional requirements of the panel structure by when the components/switchgear of the panel which are going to be housed in the panel will also be inspected.</p> <p>a)The LV. panels shall be completely assembled, wired, adjusted and tested for operation under stimulated conditions to ensure correctness of</p>			

	<p>wiring and interlocking and proper functioning of all components.b)Each LV. panels and components shall be subjected to standard routine tests as per applicable clauses of relevant standards.The above tests shall be successfully carried out at factory in the presence of Department Engineers before dispatch of LV. Panels.</p>			
15	<p>DETAILS OF INSTALLATION, TESTING AND COMMISSIONING AT SITE Site Inspection:The panel board shall be supplied in properly packed conditions. After ascertaining that there is no damage to the packing, all the items shall be inspected after unpacking. It shall be ensured that the panel boards are in accordance with the requirements as described</p>			

	<p>in the schedule and drawings. It shall also be ensured that all the components like relays, indication lamps, meters etc, are in good condition and have not suffered any damage during transit. Any such damaged components shall be replaced at site at no extra cost by the supplier. Any damage over the finished section including scratches on the paint etc shall also be attended and suitably finished by the supplier. Installation:-The Panel board shall be installed using necessary bolts for grouting of the panels and shall furnish the drawings / templates if any required for grouting the foundation bolts. In case the panels are transported in sections, the supplier shall depute a person to site to properly connect back the bus bar</p>			
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	<p>sections.All loading and unloading arrangements and transporting of the panels to sites with necessary plants / equipment and tools shall be the part of the scope of work and all required man power shall also be provided by the supplier for unloading of the panels in the panel room at site.</p>			
16	<p>Testing and commissioning:The following tests shall be conducted on the panel boards at Department site prior to their commissioning and necessary test certificates shall be submitted to the department.1.Insulation resistance between the phases and individual phases and earth.2.Earth continuity.3.All protective relays and tripping mechanism shall be tested for their proper operation.</p>			

	4.Operation and functionality tests of ACBs.			
17	<p>DRAWINGS:After the award of contract, the contractor shall submit three copies of the following drawings for approval of the Department:</p> <p>a)Outline dimensional drawing of the PCC showing the general arrangement indicating the following:</p> <ul style="list-style-type: none"> •Busbar clearances •Power and control cable entry points. •Configuration of busbar. •Details of support insulators and spacing. •Outgoing power cable termination arrangement. <p>b)single line diagram of power control centre showing protection, metering etc.,</p> <p>c)wiring diagram for communication and control wiring</p> <p>d)cubicle wiring diagram</p> <p>e)Screen</p>			

	<p>printed single line diagram of the panel clearly indicating details such as rating of incomer, outgoings, CT, PT, metering, busbar etc., shall be permanently fixed at suitable location in front of the panel.</p>			
18	<p>GENERAL CONDITIONS:1. General arrangement drawings of LV panel with all details such as makes of Relays, CTs, PTs and all Meters etc shall be submitted to the department and prior approval shall be obtained from the department before taking up the fabrication works of the panels.2. CB and all the Equipment associated instruments and meters etc. supplied shall be guaranteed for 12 months from the date of completion and handing over the installation.</p>			

	<p>Defects if any noticed during this period shall be attended by the supplier including replacement of the defective materials / equipment at free of cost.3. The 'Guaranteed Technical Particulars' and the SCADA details shall be furnished and uploaded along with the tender. Deviations shall be clearly brought out.4.Following documents shall be essentially furnished in triplicate during supply.a)Detailed maintenance manual panel.b)Detailed user manuals / maintenance instructions in respect of the protection relays, digital meters installed in the panel. c)Final GA / schematic / control wiring drawings and other drawings as necessary.d)Type test certificates in respect of the panel.e)Factory test</p>			
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	reports for panel and the bought out items like meters / relays / CT /PT.			
19	Panels shall only be fabricated from approved panel builders. List of approved panel builders is enclosed.			

AIR CIRCUIT BREAKER (ACB) specifications

Item Specifications -I

Sl. No	Specifications	Compliance (Yes /No)	Offered Specifications	Remarks
1	General:All ACBs shall comply with standards IS 13947 (2) (with latest amendments) for general rules.			
2	Construction1.All ACBs shall be provided with micro logic control unit with in built provision of comprehensive metering, relaying, protections,			

	<p>communication and control.2.All ACBs shall have minimum 2 NO + 2 NC auxiliary contacts free for use3.ACBs shall be electrically draw-out version (EDO) type. The racking handle of the ACB shall be an integral part of the ACB. It shall not be possible to remove/displace the handle from the ACB.4.ACBs shall be capable of manual operation. 5.ACBs shall have mechanical contact wear indication facility.6.It shall be possible to fit accessories on ACB such as safety shutters, door interlock, castle-key interlock etc. as per the requirement.</p>			
3	<p>Electrical1.ACBs shall be suitable for operation on 3-phase, 690V, 50Hz ac supply and shall have rated insulation voltage of</p>			

	<p>1000V AC.2.The circuit breakers shall have a minimum breaking capacity of Icu of 50kA rms. The ACB capacity shall have Ics = 100% of Icu3.ACBs shall be installed with an under-voltage release suitable for operation on 415V as with built-in time delay to avoid nuisance tripping.4.The ACBs shall have no derating up to 55°C service temperature. In case the ACB needs derating, the manufacturer shall declare the derated current carrying capacity at 55°C. The operating mechanism shall be of the Open/Closed/Open stored-energy type. 5.The closing time shall be less than or equal to 70 ms.</p>			
4	<p>Trip Unit1.The trip unit of the ACB shall be microprocessor based.</p>			

	<p>Static trip unit or thermal-magnetic trip unit is not acceptable.2.The trip unit shall have overload, short circuit and earth fault protection.3.It shall be possible to upgrade the trip unit for additional protections or communication capability etc. The trip unit shall be capable of supporting modern, fast and open bus protocol like Profibus.4.The trip unit shall have facility to indicate fault with LED indications. The memory of cause of fault shall be minimum of 48 hours.5.For incomer ACB, the trip unit shall have facility of built-in load management metering functions and additional protection as mentioned below</p> <p>5.1 Overvoltage & undervoltage 5.2 Reverse power 5.3 Overfrequency and underfrequency</p>			
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	protection			
5	<p>Interlock and safety arrangement1.The microprocessor control unit shall be equipped with a push to reset mechanical indicator for antipumping function.2.It shall not be possible for the breaker to be switch ON until it is either in SERVICE or TEST position.3.The breaker shall be capable of being racked into test or isolated position and kept locked in any of these positions.4.It shall not be possible to withdraw the breaker when spring are charged5.It shall not be possible to insert the breaker racking handle when cubicle door is open. It shall have interlock facility6.Safety shutters should be closed automatically when ACB is withdrawn7.OFF position</p>			

	pad-locking arrangement is required			
6	<p>Mechanical indicators</p> <p>Mechanical indicators on the front panel of the power circuit breakers shall indicate the following status conditions:</p> <ol style="list-style-type: none"> 1. 'ON' (main contacts closed) Spring charged 2. 'ON' (main contacts closed) Spring discharged 3. 'OFF' (main contacts open) Spring charged – circuit breaker ready to close 4. 'OFF' (main contacts open) Spring charged – circuit breaker not ready to close 5. 'OFF' (main contacts open) Spring discharged 			
7	<p>Protection</p> <ol style="list-style-type: none"> 1. The microprocessor release shall be housed in separate enclosure and hence shall be totally insulated with respect to 			

	<p>the power circuit. The microprocessor release shall measure the true rms values to make the measurement free from the influence of harmonics. The trip time shall preferably be within 30ms and the setting range shall cover the following:</p> <p>3. Overload - the rated current (I_r) adjustable from 0.4 to 1.0 times the nominal current (I_n) with adjustable delay settings</p> <p>4. Short circuit - adjustable from 0.4 to 1.0 times the rated current (I_r) with time delay setting range from instantaneous to 0.4s</p> <p>5. Instantaneous – adjustable from 2 times the nominal current (I_n) upto the circuit breaker electrodynamic withstand. It should be possible to switch OFF the instantaneous protection to enable total time discrimination upto the</p>			
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	<p>breaker capacity 6. Earth fault-adjustable threshold (0.2 to I_n) with time delay setting range from 100ms to 400ms 7. Indication of type of fault (O/C, S/C or E/F) locally by LED is preferred 8. Local overcurrent pre-trip alarm is preferred by LED on microprocessor release with two levels 8.1. Glowing steady when load current reaches 90% of rated current I_r 8.2. Flashing when load current reaches 105% of rated current 9. Thermal memory: the microprocessor release shall optimise the protection of equipment or the circuit conductors in the event of repeated overloads or faults by using thermal integration to memorize temperature loss 10. Safety: internal overheating of microprocessor control</p>			
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	unit shall be signalled by self monitoring alarm11.The microprocessor release shall make it possible to have full discrimination with downstream MCCBs			
8	Accessories1.ACB shall be provided with following accessories, if specified in schedule of quantities.1.1Further, these devices shall be field fittable from the front and common for all ratings2.Undervoltage3.Shunt-trip4.Closing coil5.Auxiliary contacts: 2 NO + 2 NC (provision for additional changeover switches whenever required)			
9	Testing1.Test certificate2.Original test certificate of ACB as per IS 13947-2/IEC 947-2 shall be provided on request.			

10	Make of the ACBs supplied shall be from the list of approved makes.Approved make of ACBs: SCHNEIDER, L&T, ABB, SIEMENS, GE, C&S ELECTRIC, LEGRAND			
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MOULDED CASE CIRCUIT BREAKER (MCCB) specifications

Item Specifications -II

Sl. No	Specifications	Compliance (Yes /No)	Offered Specifications	Remarks
1	Standard Feature –a)The MCCBs should be extra current limiting type with trip time of less than 10 msec under short circuit conditions. The current limiting action should be achieved with repulsion principle.b)The MCCBs should preferably have an anti-reclosing feature.c)The MCCBs should be either 3 or 4 poles as specified in the			

	schedule of quantities.			
2	<p>Standards & Certification –</p> <p>a)The MCCBs shall comply with the requirements of the IEC & IS Standards i.e. –IEC 60947-2/ IS13947 – Part 2.b)The MCCBs should have test certificates for Breaking capacities from independent test authorities like CPRI / ERDA / ASTA.c)The MCCBs should confirm to glow wire Tests as Per IEC 60695-2-1 with superior quality of engineering grade plastics used for insulation purpose d)The MCCBs shall be CE Marked.</p>			
3	<p>Breaking Capacity –a)The MCCBs should have a Service short circuit breaking capacity (Ics) of not less than 50 kA rms or as specified in the schedule of quantities at</p>			

	415 Volts 50Hz AC. b)The service breaking capacity should be equal to ultimate breaking capacities (Icu) (i.e Ics= Icu=100%)			
4	a)The protection release should be Microprocessor based .It should be True RMS sensing with Self-Diagnostic feature. The release should offer in-built LSI protection b)The release should have LCD Display & be communication capable as in-built feature Protection Releases –c)Over load protection (L)– Adjustable from 40% to 100 % of In with settable time delay.Pre-Trip alarm setting from 80% to 100% of Ir. Provision to bypass Protection mode d)Short circuit protection (S) - Adjustable from 2 to 8 times Ir with settable time delay.Pre-Trip alarm			

	<p>setting from 80% to 100% of Ir. Cold load pick-up ON/OFF feature & I2T ON/OFF feature. Provision to bypass Protection mode</p> <p>e) Instantaneous protection (I)- Adjustable from 2 to 8 times of In with settable time delay Pre-Trip alarm setting from 80% to 100% of Ir .Cold load pick-up ON/OFF feature .Provision to bypass Protection mode. Analog override with non-by passable instantaneous at 8 I n or 12 In. f) Ground Fault protection (G)-Adjustable from 20% to 50% of In with settable time delay . Pre-Trip alarm setting from 80% to 100% of Ir .Note: Provision to bypass Protection mode .</p>			
5	MCCB shall be plugin base type			
6	Metering &			

	<p>communication)</p> <p>a)The MCCB Release should have in-built back-lit LCD display for all current parameters</p> <p>b)The MCCB Release should be communicable through in-built RS485 port with MODBUS protocol features</p> <p>c)The MCCB should be compatible to operate by comprehensive software for remote tripping / Settings / Event Reading. All settings should be Password protected.</p>			
7	<p>Accessories</p> <p>a)Internal Accessories - The MCCB should have user friendly clip-fit type site fittable internal accessories like Shunt / Under voltage / Trip Alarm contacts / auxiliary contacts etc</p> <p>b)Internal accessories should have double insulation & No side-bias</p> <p>c)External Accessories</p>			

	<p>–d)MCH - All MCCBs should be fitted with motor mechanism module with communicating auxiliary contacts. Test connector shall be provided in the front of MCCB for test. LED indication shall be provided for fault indication. Zone selective interlocking shall be provided. MCCB shall be suitable for remote operation. e)Terminal Shrouding- The MCCB Terminations/Spreader links should be shrouded & touch proof</p>			
8	<p>Other Featuresa)The MCCBs should be suitable for contact inspection. b)The MCCBs shall be suitable for both Cu and Al terminationc)The MCCBs shall have spreader links and phase barriers as standard feature</p>			

9	Make of the MCCBs supplied shall be from the list of approved makes. Approved make of MCCBs: SCHNEIDER, L&T, AB B, LEGRAND, SIEMENS, GE			
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Specifications of digital multi function meter

Item Specifications -III

Sl. No	Specifications	Compliance (Yes /No)	Offered Specifications	Remarks
1	Make of the Digital multifunction meter supplied shall be from the list of approved makes. Approved makes of Digital multifunction meter : L&T, SCHNEIDER, MECO, NEUTRONICS, NIPPEN, CG SCHLUMBERGER, ELMEASURE, RISHAB, KRYKARD, CIRCUTOR, RIKEN, AUTOMATIC ELECTRIC(AE), SATEC, SECURE			

2	Multifunction meter shall be of digital type			
3	Accuracy Class :1			
4	Size: 96 x 96mm			
5	Display device: LCD with Back light.			
6	RS485 Port ready to hook to MODBUS protocol			
7	Record and read voltage, current, frequency, power factor, active power(P),Reactive power(Q),apparent power(S) & THD			
8	facility to read individual harmonic upto 21st order			
9	Real time clock(RTC)			
10	Shall have four outputs/ports:RS485,Anal og,Digital & Pulse			
11	AC/DC auxiliary supply			
12	Self-diagnostic features			

	shall be provided			
13	User programmable features shall be provided.Password settings for programming mode shall be provided			

Specifications of AC onload Bypass switch

Item Specifications -IV

Sl. No	Specifications	Compliance (Yes /No)	Offered Specifications	Remarks
1	Make of the on load Bypass switch.Approved makes of on load Bypass switches:L&T,Siemens,Schneider,HPL,GE Power controls,Indo-Asian,C&S Electric,Standard,Havells			
2	Rated operational current Ie = 1200Amp			
3	Rated Insulation and operational voltage Ui(Vac) =1000Volts			

9	Shall conform to IS/IEC:60947-3			
10	4 pole ON load Bypass switch for 500V,AC supply ,50Hz.The operation handle shall have 3 distinct positions viz.,SOURCE 1-OFF-SOURCE 2.The switch shall have pad locking facility in any of the 3 positions and clear visual indication of positions of operating handle and suitable for a current rating of 1200Amp.			
11	Product catalogue/datasheet of the quoted make shall be furnished along with the technical bid.			

Specifications of Onload Changeover switch

Item Specifications -V

Sl. No	Specifications	Compliance (Yes /No)	Offered Specifications	Remarks
1	4 pole ON load Motorized change over switch for 500V,AC supply ,50Hz.The operation handle shall have 3 distinct positions viz.,SOURCE 1-OFF-SOURCE 2.The switch shall have pad locking facility in any of the 3 positions and clear visual indication of positions of operating handle and suitable for a current rating of 1200Amp.			
2	Make of the Onload Changeover switch.Approved makes of Onload Changeover switch:L&T,Siemens,Schneider,HPL,GE Power controls,Indo-Asian,C&S Electric,Standard,Havells			
3	Product catalogue/datasheet of the quoted make shall be furnished along with the			

	technical bid.			
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Vendor Specified Terms

Description	Vendor Terms
Taxes and other costs, if any	
Warranty	
Delivery	
Delivery Term	
Payment	
Validity	
Any other terms	
<p>SECURITY DEPOSIT: On acceptance of the tender, the Contractor shall, at the option of the Purchaser and within the period specified by him, deposit with him, in cash or in any other form as the Purchaser may determine, security deposit not exceeding ten percent of the value of the Contract as the Purchaser shall specify. If the Contractor is called upon by the Purchaser to deposit, Security and the Contractor fails to provide the security within the period specified, such failure shall constitute a breach of the Contract, and the Purchaser shall be entitled to make other arrangements for the re-purchase of the stores Contracted at the risk of the Contractor in terms of Sub-Clause (ii) and (iii) of clause 10(b) of FORM-B and/or to recover from the Contractor,</p>	

damages arising from such cancellation.	
<p>PERFORMANCE BANK GUARANTEE: To fulfill guarantee conditions outlined in Clause 20 (a) to (e) of FORM-B, the Contractor shall, at the option of the purchaser, furnish a Bank Guarantee (as prescribed by the purchaser) from a Bank approved by the purchaser for an amount equivalent to 10% of the value of the Contract along with first shipment documents. On the performance and completion of the Contract in all respects, the Bank Guarantee will be returned to the Contractor without any interest.</p>	
<p>DELAY IN COMPLETION / LIQUIDATED DAMAGES: If the Contractor fails to deliver the stores within the time specified in the Contract or any extension thereof, the purchaser shall recover from the Contractor as liquidated damages a sum of one-half of one percent (0.5 percent) of the Contract price of the undelivered stores for each calendar week of delay. The total liquidated damages shall not exceed ten percent (10 percent) of the Contract price of the unit or units so delayed. Stores will be deemed to have been delivered only when all their component parts are also delivered. If certain components are not delivered in time, the stores will be considered as delayed until such time as the missing parts are delivered.</p>	

Supporting Documents from Vendor

Attachment - I:

Attachment - II:

Price Bid Form

Item Description	Slab Range	Qty	UOM	Currency	Unit Price	Total Price
POWER PANELS Supply ,installation,testing and commissioning of IT(Isolation transformer) bypass panel conforming to enclosed specifications in Annexure-II & enclosed single line drawing.Schedule of quantities of the panel attached in Annexure-I	-	2	No.	-	-	-
POWER PANELS Supply ,installation,testing	-	2	No.	-	-	-

g and commissioning of UPS Output panel conforming to enclosed specifications in Annexure-II & enclosed single line drawing.Schedule of quantities of the panel attached in Annexure-I						
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Break-up of other taxes and other costs should be specified in respective narration columns.

Sum of these Break-up values should be specified in respective value columns.