

TANTRANSCO LTD

SPECIFICATION FOR SUPPLY OF
33KV INDOOR
VACUUM CIRCUIT BREAKER PANELS
UNDER OPEN TENDER RATE CONTRACT SYSTEM

SPECIFICATION No. T- 2235

DUE DATE : 08.06.22

OFFICE OF THE
CHIEF ENGINEER/TRANSMISSION ,
4TH FLOOR, SOUTHERN WING
TANTRANSCO BUILDING,
No.144, ANNA SALAI,
CHENNAI – 600 002.

TANTRANSCO LTD
E-Tender Notice

(Tenders invited from Domestic Bidders only)

Online E-bids are invited from eligible and interested firms for the supply of 57 nos. of 33KV Indoor Vacuum Circuit Breaker Panels under Annual rate contract basis on domestic competitive bidding through the e-tender portal of NIC
<http://tntenders.gov.in/nicgep/app>

(i) Tender Specification No.	T-2235 dt.08.06.2022
(ii) Name of work	Supply of 57 nos. of 33KV Indoor Vacuum Circuit Breaker Panels
(iii) Quantity	33KV Indoor Vacuum Circuit Breaker a) Transformer Panels (LV) - 17 nos. b) Bus Coupler Panels - 07 nos. c) Feeder Panels - 33 nos.
(iv) Method of Tender	E-Tender single part system (Online: Techno – Commercial Bid and Price Bid).
(v) URL for online submission of e-tender	https://tntenders.gov.in/nicgep/app
(vi) a). Earnest Money Deposit (EMD)	Rs.6,73,760/- (Rupees Six Lakhs seventy three thousand seven hundred and sixty only) Mode of payment must be as stipulated in Section-II of the tender document.
b).PEMD	Rs.20,00,000/- (Rupees Twenty Lakhs only)
vii) Tender document download start date and time	06.05.2022 @ 17.00 hrs
viii) Clarification start date and time	07.05.2022 @ 11.00 hrs
ix) Clarification end date and time	17.05.2022 @ 15.00 hrs
x) E-tender submission start date and time	09.05.2022 @ 15.00 hrs
xi) Tender document download end date and time	07.06.2022 @ 14.00 hrs
xii) E-tender submission end date and time	07.06.2022 @ 14.00 hrs

xiii) Date & time of opening of E-tender	08.06.2022@ 15.00 hrs
xiv) E-tender documents are available at	TANTRANSCO web site (www.tantransco.gov.in) and TN Govt. Website (www.tenders.tn.gov.in) & e-portal (https://tntenders.gov.in/nicgep/app .)
xv) Documents to be uploaded by the Tenderers during online submission of e-tender	Techno commercial bid, Price bid (filled up format) (BOQ) and Technical and Financial documents as mentioned in Section-I (Check List). Schedules B to J and Annexure I, II, III & IV, and other documents whichever is applicable.
xvi) Clarification to be sought for from (By E.mail only)	The Chief Engineer/Transmission, 4 th Floor, Southern wing, TANTRANSCO Building, No.144, Anna Salai, Chennai – 2. i). cetr@tnebnnet.org ii). setr2@tnebnnet.org
xvii) Place at which tenders will be Opened	Office of the Superintending Engineer/ Transmission II, 5 th floor, Northern wing, TANTRANSCO Building, No.144, Anna salai, Chennai – 600 002.

NOTE :

1. In the event of the specified date of opening of bids being declared holiday, the bid shall be opened on the next working day at the same time and venue.
2. Bid document can be downloaded free of cost online through the website <http://tntenders.gov.in/nicgep/app> only by those contractors, who are having valid Digital Signature Certificate **and the bid document cannot be purchased from the Office of the Chief Engineer by remitting the cash in the office of the Chief Engineer and no pre request for issue of bid document will be entertained in the Office of the Chief Engineer.**
3. The Contractors who had downloaded the Bid document from the website shall submit the Bid through NIC Website before the scheduled time of submission. **The electronic bidding systems would not allow any late submission of bids. (No bid document is to be sealed and brought to the office of the Chief Engineer for placing in Tender Box).**
4. The Tenderers shall ensure whether any Clarification/Amendment is issued to the Specification, before submission of their Tender, by visiting the respective Website.
5. For other details refer Section –V, “Instruction to Tenderers” in the tender document.

SPECIFICATION NO. T-2235

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ANNEXURES

ANNEXURES

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SECTION – I
CHECK LIST

Bidders are requested to duly fill in the Check list. This Check list gives only certain important items to facilitate the Bidder to make sure that the necessary data/information as called for in the tender document has been uploaded by them along with their offer. This, however, does not relieve the bidder of his responsibilities to make sure that his offer is otherwise complete in all respects.

Please ensure compliance and answer Yes/No against the following points:

S.No	PARTICULARS OF DOCUMENT	SUBMITTED (YES/NO)	PAGE.NO (IF YES)
1.(a) (b)	Proof for payment of EMD (Scanned copy of e-payment receipt/Copy of Bank Guarantee/PEMD) If 'NO', Proof of SSI or NSIC or Memorandum part II (for local unit) / NSIC certificate (for outside unit) along with Undertaking in lieu of EMD as in 3 (xiv) below.		
2.	Documentary evidences for BQR stipulated in section III: I. Supply II. Performance III. Annual Turn Over IV. Type test		
3.	Other documents: i) Guaranteed Technical Particulars-Annexure-I ii) Check list for Bid Qualification and Commercial terms--Questionnaire-A iii) Undertaking for Total Back-up Guarantee iv) Check list for Technical terms--Questionnaire -B v) Schedule of Prices- Schedule -A vi) Schedule of materials – Schedule -B vii) Deviation from Technical Specification – Schedule-C1 viii) Deviation from Commercial Specification – Schedule-C2 ix) Statement of supply orders executed/under execution during the past 3 years as on the date of Tender		

	opening- Schedule-D ix) Declaration form - Schedule-E x) Type test particulars - Schedule F (TEST DONE WITHIN 10 YEARS AS ON DATE OF TENDER OPENING) xi) Undertaking towards jurisdiction for legal proceedings – Schedule G xii) Undertaking towards Input Tax Credit- Schedule-H xiii) Bank Guarantee in Lieu Of Earnest Money Deposit –Schedule I xiv) Undertaking in lieu of EMD – Schedule J		
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Place:

Signature:

Date:

Designation:

Company seal:

SECTION II

EARNEST MONEY DEPOSIT

1) Tenderer should pay the specified amount towards Earnest Money Deposit, as follows:

Earnest Money Deposit: Rs.6,73,760/- (Rupees Six Lakhs seventy three thousand seven hundred and sixty only)

2) The Earnest Money Deposit specified above should be paid either

(i) through RTGS/NEFT by way of Account transfer to TANTRANSCO's account/Irrevocable Bank Guarantee from Nationalised bank.

Account No : 0911201022266

Name of the Bank : Canara Bank

IFSC code : CNRB0000911

In case of irrevocable Bank Guarantee from Nationalized bank, it should be a single Bank Guarantee valid for a period of one year.

The hard copy i.e the original Bank Guarantee as uploaded in the E-tender is to be submitted to the O/o Chief Engineer/Transmission immediately on tender opening. The Bank Guarantee format shall be as per Schedule-I.

Any other mode of payment of EMD other than NEFT/RTGS/irrevocable Bank Guarantee from a Nationalized bank shall not be accepted towards EMD and the tenders shall be rejected if EMD is not paid in the prescribed manner.

(ii) The scanned copy of proof for payment of EMD (i.e. E-payment receipt) duly reflecting the UTR Number shall be uploaded. The EMD amount has to be received in TANTRANSCO account through e-payment, 2 hours before closing time of tender. Offers for which EMD as above (RTGS/NEFT) received beyond 2 hours before tender closing time will be summarily rejected.

(iii) The original proof shall be furnished within 1 week, on demand from TANTRANSCO at a later date.

(iv) The details of proof for payment of EMD physically sent should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise, the uploaded bid will be summarily rejected.

3(a) The PEMD holder for Rs.20,00,000/- or above with TANTRANSCO at Head quarters are eligible to participate in this tender.

(b) Scanned copy of proof of PEMD shall be uploaded.

4) (i) The MSME's which have filed Udyog Aadhar Memorandum (UAM) and obtained UAN (Udyog Aadhar Number) with registration certificate shall be exempted in respect of SSI units while participating in TANTRANSCO tenders.

The Small Scale Industrial units located within the State and Registered with the Tamil Nadu Small Industries Development Corporation or the National Small Industries Corporation or Holding Acknowledgement issued for Entrepreneur Memorandum Part-II obtained from the District Industries Center in respect of those items for which the Registration Certificate/ Acknowledgement has been issued, Department of the Government of Tamil Nadu and Undertakings and Corporations owned by Government of Tamil Nadu, Labour Contract Co-operative Societies, Tiny Industries classified under SSI registered with the State of Tamil Nadu and Registration Certificate issued by Department of Industries and Commerce/Government of Tamil Nadu, Small Scale Industrial Units located outside the State and such of these units registered with National Small Industries Corporation in respect of the items manufactured by them are the only categories of Institutions/Industries exempted from the payment of Earnest Money Deposit. Udyog Aadhar Memorandum submitted by bidders shall also be accepted for permitting EMD exemption in respect of SSI units while participating in TANTRANSCO tenders.

(ii) Those tenderers who are exempted from payment of EMD shall upload a scanned copy of an undertaking in lieu of EMD in a Non-judicial Stamp paper of value not less than Rs.100/- (Rupees Hundred only) in the form as per Schedule-J to the effect to pay as penalty an amount equivalent to EMD in the event of non-fulfillment or non-observance of any of the conditions stipulated in the contract consequent to such breach of contract. The State Government, Public Sector Undertakings who are exempted from payment of EMD, should also pay as penalty an amount equivalent to the amount fixed as EMD in the event of non-fulfillment or non-observance of any of the conditions stipulated in the contract. The original proof (Undertaking in lieu of EMD) shall be furnished within a week, on demand from TANTRANSCO at a later date.

iii) Small Scale Industries registered within the State of Tamil Nadu shall enclose **duly attested Photostat copy of their Registration Certificate and Udyog Aadhar Memorandum** showing the subject materials specifying capacity which they are permitted to manufacture and the period of validity of the certificate as proof of eligibility for exemption from payment of EMD.

iv) **A. Classification of Enterprises:** An enterprise shall be classified as a micro, small or medium enterprises on the basis of the following criteria, namely:-

(a) a micro enterprise, where the investment in plant and machinery or equipment does not exceed one crore rupees and turnover does not exceed five crore rupees;

(b) a small enterprise, where the investment in plant and machinery or equipment does not exceed ten crore rupees and turnover does not exceed fifty crore rupees; and

(c) a medium enterprise, where the investment in plant and machinery or equipment does not exceed fifty crore rupees and turnover does not exceed two hundred and fifty crore rupees.

B. Calculation of Turnover:

A certificate from Chartered Accountant shall be furnished along with the bid from the bidders whose turnover includes export proceeds, for ascertaining the turnover achieved on export of goods or services or both and included in the total turnover.

C. Calculation of Investment:

The investment value in Plant and Machinery for the purpose has to be certified by a Chartered accountant and the same is to be uploaded in the bid in case the bidder claims EMD exemption.

D. Registration of existing enterprises:

i. All existing enterprises registered under EM-Part-II or UAM shall register again on

the Udyam Registration portal on or after the 1st day of July, 2020.

ii. All enterprises registered till 30th June, 2020, shall be re-classified in accordance

with the said notification.

iii. The existing enterprises registered prior to 30th June, 2020, shall continue to be valid only for a period up to the 31.03.2022.

iv. An enterprise registered with any other organisation under the Ministry of Micro, Small and Medium Enterprises shall register itself under Udyam Registration.

(v) The prospective bidders shall furnish the **audited attested copy of Profit and Loss Account, Balance sheet with the value of Plant & Machinery, along with the proof for exemption from payment of EMD** in order to ensure the SSI status of the firm.

All SSI / NSIC units shall furnish the above audited attested copy of Profit and Loss Account, Balance sheet with the value of Plant & Machinery, along with the proof for exemption from payment of EMD. If not furnished along with undertaking, the tenders will not be evaluated. In case the investment held by them in Plant and Machinery as per their financial statement of Accounts exceeds Rs.5 Crores, the

General Manager, District Industries Centre concerned shall be requested to verify the SSI status of the firm. Till receipt of confirmation from General Manager, District Industries Centre concerned the exemption from paying EMD for SSI units shall not be extended.

vi) Apart from the above, the TANTRANSCO has the right to adopt any changes based on the TANTRANSCO 'Accounts Branch' instruction, with regard to extending exemption from paying EMD.

Conditions for Liable for rejection of bids:

a) TENDERS RECEIVED WITHOUT THIS UNDERTAKING WILL BE DISQUALIFIED.

b) Tender will be rejected if the undertaking is not signed/ authenticated in all pages of undertaking.

c) Signature of 2 Nos. witnesses should be affixed at the end of undertaking along with details of name and address.

d) The tenderers shall upload the scanned copy of audited attested copy of Profit and Loss account/ Balance Sheet along with the proof for exemption from payment of EMD in order to ensure the SSI status of the firm based on the investment held in Plant and Machinery for extending exemption from paying EMD.

e) Others viz. Central and other State Government Departments/ Undertakings and Corporations other than those in Tamil Nadu shall have to pay Earnest Money Deposit and Security Deposit cum Performance Bank Guarantee.

PEMD holders are requested to choose the option "Exempted from EMD", in the NIC portal while proceeding with the online submission of bid. It may be noted that exemption of payment of EMD is meant for PEMD/SSI/NSIC holders only.

1. The EMD will not carry any interest.
2. The Earnest Money Deposit will be refunded to the unsuccessful tenderers on application to the Superintending Engineer/Transmission II/Chennai-2 after intimation of the rejection / non-acceptance of their tenders sent to them.
3. CHEQUE/DD/Banker's Cheque will not be accepted towards EMD and the tenders shall be rejected if EMD is not paid in the prescribed manner.

4. The following should be uploaded by the Vendor during submission of Techno-Commercial bid for payment of EMD failing which the offer will be SUMMARILY REJECTED.

- (i) The e-receipt of payment of EMD through Account Transfer in NEFT/RTGS mode.(or)
- (ii) The proof of Bank Guarantee towards the EMD amount with validity of one year.(or)

- (iii) The proof of exemption of EMD with an undertaking in lieu of EMD and documents in support of investment held in plant and machinery certified by the Chartered Accountant and duly attested.
 - (iv) Only on receipt of the original Bank Guarantee the offer of the tenderer will be considered for evaluation.
5. The Earnest Money Deposit made by the Tenderer will be forfeited with applicable GST if :-
- a) He withdraws his tender or backs out after acceptance.
 - b) He withdraws his tender before the expiry of validity period stipulated in the specification or fails to remit the Security Deposit cum Performance.
 - c) The tenderer violates any of the provisions of these regulations contained herein.
 - d) The tenderer revises any of the terms quoted during the validity period.
 - e) The tenderer produces bogus documents or if the documents contain false particulars.
 - f) In the event of the document furnished with the offer being found to be bogus or the documents contain false particulars; the EMD paid by the tenderer will be forfeited in addition to blacklisting them for future tenders/contracts in TANTRANSCO.
- g) The EMD received from the unsuccessful tenders will be refunded on finalisation of tender and on getting application for refund along with pre-stamped receipt.
6. Apart from the above, the TANTRANSCO has the right to adopt any changes, based on the TANTRANSCO's Accounts Branch instructions, with regard to extending exemption from paying EMD.

SECTION - III
BID QUALIFICATION REQUIREMENTS (BQR)

THE BIDDERS shall become eligible to bid on satisfying the following "BID QUALIFICATION REQUIREMENTS" and uploading of the required documentary evidences (SCANNED COPIES) along with the tender

1) The bidder shall be a manufacturer of the tendered material having manufacturing facility in India (or) Licensed/Authorised Channel Partner of the Original Equipment Manufacturer (OEM) having manufacturing facility in India. In case of manufacturer, proof for manufacture of the same viz, Manufacturing License, ISO certificate, NSIC certificate, BIS License, UAM etc., shall be furnished. In case of Channel Partner, proof for manufacture by the OEM, Channel Partner/Dealership certificate or any document towards proof of Channel Partners and undertaking by the OEM as in Annexure-IV shall be furnished.

2) The bidder shall have supplied a minimum of 14 Nos. of 33KV ID VCB panels of offered make during the preceding ten years as on the date of tender opening to State Electricity Boards/Power Utilities/ Central/State Public Sector undertaking in India. **If the bidder is participating as a channel partner, then the supply experience of either the bidder (or) its OEM will be considered.**

3) At least 5 Nos. of 33KV Indoor Vacuum Circuit Breaker panels of offered make supplied by the manufacturer or through any Channel Partner during the preceding ten years as on the date of tender opening to State Electricity Boards/Power Utilities/Central/State Public Sector undertaking in India should have been in satisfactory operation for a minimum period of two years. Copies of purchase orders along with end user's certificate for satisfactory performance, duly mentioning the make of ID VCB, shall be furnished in proof of the above.

4) The Annual Turn Over of the Bidder shall be more than **Rs.1,68,44,300/-** (Rs.One crore sixty eight lakhs forty four thousand three hundred only) during any one of the last three years (2018-19, 2019-20 & 2020-21).

Attested copy of audited Profit & loss account, Balance sheet (or) attested copy of Audited Annual Turnover certificate (or) Income Tax return filed by the bidders (or) copy of enlistment certificate issued by NSIC valid on the date of tender opening containing turnover details shall be furnished as documentary proof to ensure the turnover criteria prescribed.

5) The copy of the Type Test Certificates for the tests prescribed as per Schedule-F conforming to relevant IS/IEC of latest issue and as amended upto date, for the Tendered material/ equipment at any one of the NABL accredited Government/ Government recognized Laboratories (or) accredited foreign Laboratories along with the offer issued not earlier than 10 years as on the date of Tender opening should be enclosed.

The above type test certificates should enclose the drawings of the material/equipments, duly signed under seal by the Institution who had issued

the type test certificate. The type test reports as per the list furnished in Schedule-F shall be uploaded in proof of the above.

6) NEW ENTRANT:

- a. The TANTRANSCO has right to place order on New entrant(s) upto 20% of tendered quantity on each new entrant provided,
 - i. A tenderer shall be declared as "New entrant" who has no previous experience of supply for the tendered items or no satisfactory period of service or no financial turnover but have infrastructure/manufacturing facility as per the inspection report of Third party inspection or TANGEDCO or TANTRANSCO Engineers.
 - ii. The tenderer who have lesser quantity of supply experience or lesser satisfactory period of service or lesser financial Turn-over criteria than prescribed in the tender document may also be considered under New entrant category.
- b. The tenderer is eligible to be considered for placement of orders under New Entrant category if the bidder is the evaluated and negotiated L1 tenderer.
- c. The tenderers who have been considered under New Entrant category shall satisfy all technical, commercial and BQR conditions except BQR condition of quantity of previous experience of supply (or) satisfactory period of service (or) financial turnover criteria.
- d. TANTRANSCO have right to place order upto 20% of the tendered quantity on a New entrant. In case more than one bidder qualify under the above New Entrant category, TANTRANSCO has right to place order upto 20% of the tendered quantity on each New entrant.

NOTE: The offer of the bidders who have stated to be previous suppliers to TNEB/TANGEDCO/TANTRANSCO will be considered for further evaluation, even though they have not enclosed copies of purchase orders or End user certificate etc., after ensuring with the purchase orders placing authorities. However, the tenderer has to furnish the Purchase Order No. and Date of Issue along with the details of Purchase Order issuing authority.

Documentary proof/evidence in support of the BQR conditions mentioned above should be uploaded along with their offers.

The offers of bidders not satisfying the above "Bid qualification requirements" will be summarily rejected.

SECTION – IV
REJECTION OF TENDERS:

- (I) Tenders will be SUMMARILY rejected if
- a. The EMD requirements are not complied with,
 - b. Not satisfying any of Bid Qualification Requirements.
 - c. If the documents furnished with the offer is found to be bogus or the documents contains any false particulars.
 - d. Tenders should quote minimum quantity of 20% of tendered quantity. The offer of bidders who have quoted for lesser quantity than the minimum quantity prescribed shall be summarily rejected. In the event of floating tender for procurement of more items of similar materials of various sizes or ratio etc., 20% of tendered quantity of each quoted items shall be considered for arriving at minimum quantity.
 - e. the bids are received through Consortium/Joint venture.
 - f. The details of the e-receipt/Bank Guarantee for EMD/Undertaking in lieu of EMD should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise the uploaded bid will be REJECTED.
 - g. If the BOQ file is found to be modified by the bidder, the bid will be

SUMMARILY REJECTED.

- II. Tender is LIABLE to be rejected, if it is:
- i) not covering the supply of equipments/materials with all accessories.
 - ii) with validity period less than that stipulated in this specification.
 - iii) not in conformity with TANTRANSCO's Commercial terms and Technical Specifications (Section - VI & VII).
 - iv) not signed properly by the tenderer.
 - v) received from a Tenderer who is directly or indirectly connected with Government service or TANTRANSCO Service or services of local authority.
 - vi) from any black listed Firm or Contractor.
 - (g) received by Telex/E-Mail/FAX.
 - (h) from a tenderer whose past performance/Vendor rating is not satisfactory
 - (i) not containing all required particulars as per Schedule - A to J.
 - (j) Received from any joint venture of firms/ companies/ individual or consortium of firms /companies/ individual.
 - (k) Received from consortium of SSI units.
 - (l) Not furnished **GST Identification Number** of the tenderer in the offer.

SECTION – V
INSTRUCTIONS TO TENDERERS

1.0. The E-Tender shall be in Single Part as detailed below.

- a) Proof for payment of EMD / Exemption from payment of EMD,
- b) All required technical and commercial documents including documentary evidences to satisfy the Bid Qualification Requirement
- c) PRICE BID (BOQ)

All the tenders shall be prepared and uploaded strictly in accordance with the instructions set forth herein. THE TENDERERS WHO DO NOT FULFILL THE "BID QUALIFICATION REQUIREMENTS" as per SECTION-II NEED NOT PARTICIPATE IN THE TENDER. OFFERS NOT SATISFYING THE "BID QUALIFICATION REQUIREMENTS" WILL NOT BE CONSIDERED AND WILL BE SUMMARILY REJECTED.

Provisions of Tamilnadu Transparency in Tenders Act 1998 and TamilNadu Transparency in Tender Rules 2000 and subsequent amendments will be applicable to this tender.

The tenderers shall upload the scanned copy of PAN card, GST details and other relevant documents without fail.

2.0. SCOPE OF SUPPLY:

2.1. The scope of supply of the material (described in Schedule-A) includes design, manufacture, inspection, testing, packing, forwarding and delivery of the materials detailed herein, at TANTRANSCO stores anywhere in Tamil Nadu.

2.2. Rate contract shall be finalized for a period of one year from the date of award of contract.

2.3. Tenders should quote minimum quantity of 20% of tendered quantity. The offer of bidders who have quoted for lesser quantity than the minimum quantity prescribed shall be summarily rejected. In the event of floating tender for procurement of more items of similar materials of various sizes or ratio etc., 20% of tendered quantity of each quoted items shall be considered for arriving at minimum quantity.

2.4 The quantity indicated in schedule of requirement is approximate. The indent will be placed subsequently as and when there is requirement, upto the last date of validity of rate contract. The quantity finally ordered may vary to the extent of 25% either way of the approximate quantity indicated in the Schedule of requirement. The purchaser reserves the right to issue any number of indents for supply of materials during the rate contract period.

3.0. INSTRUCTIONS FOR ONLINE BID SUBMISSION:

The bidding under this contract is electronic bid submission through website <https://tntenders.gov.in/nicgep/app> only. Detailed guidelines for viewing bids and submission of online bids are given on the website. Any citizens or prospective bidders can log on to this website and view the invitation for Bids and can view the details of works for which bids are invited.

4.0. REGISTRATION:

- 1) The prospective bidders can submit bids online. However, the bidders are required to have enrolment/registration in the website by clicking on the link "Online bidder enrolment" which is free of charge.
- 2) As part of the enrolment process, the bidders are required to choose a unique username and assign a password for their accounts.
- 3) Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These details would be used for any communication from the e-Portal.
- 4) Upon enrolment, the bidders are required to register their valid Digital Signature Certificate (DSC) (Class II or Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / nCode / eMudhra etc.), with their profile.
- 5) Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC's to others which may lead to misuse.
- 6) Bidder then can login to the site through the secured login by entering their user ID / password and the password of the DSC / e-Token.

5.0. SEARCHING FOR TENDER DOCUMENTS

- 1) There are various search options built in the Website, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, organization name, location, date, value, etc.
- 2) Once the bidders have selected the tenders they are interested in, they may download the required documents/tender schedules. These tenders can be moved to the respective 'My Tenders' folder. This would enable the Tamil Nadu Govt. e-Procurement Portal, to intimate the bidders through SMS/e-mail in case there is any corrigendum issued to the tender document.
- 3) The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk.

6.0. PREPARATION OF BIDS

- (a) Bidder should take into account any corrigendum published on the tender document before submitting their bids.
- 2) Bidders are requested to go through the NIT and the tender document carefully, to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
- 3) Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document and generally, they can be in PDF / XLS / RAR / DWF/JPG

formats. Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.

- 4) To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use "My space or "Other Important Documents" area available to them to upload such documents. These documents may be directly submitted from the "My Space" area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.
- 5) The completed bid comprising scanned copy of the proof for the payment of EMD and necessary technical and commercial documents should be uploaded on the website along with signed and scanned copies of requisite certificates as are mentioned in the different sections in the tender document.

7.0. ELECTRONIC SUBMISSION OF BIDS:

The bidder shall submit online the requirements under qualification criteria and Technical Documents required and Price Schedule/BOQ.

- (a) All the scanned documents of bidder which are uploaded shall be duly signed by the bidders and affixed with firm's seal.
- (b) Person who is submitting the bid shall indicate his position in the firm,
- (c) All the documents are required to be signed digitally by the bidder.
- (d) After electronic online bid submission, the system generates a unique bid reference number which is time stamped. This shall be treated as acknowledgement of bid submission.

Procedure for submission of bids:

- 1) Bidder should log into the site well in advance for bid submission so that he/she can upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
- 2) The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
- 3) Bidder has to select the payment option as "offline" to pay the EMD amount through RTGS/NEFT by way of account transfer as applicable and enter details of the instrument. EMD may be paid through any other mode stipulated in Section-II (Earnest Money Deposit) of the tender document.
- 4) The scanned copy of e-payment receipt of EMD amount/Undertaking in lieu of EMD has to be uploaded. The details of the e-receipt/Undertaking in lieu of EMD, as the case may be physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise the uploaded bid will be **summarily REJECTED**.
- 5) A BOQ format for the price bid has been provided with the tender document and to be filled by all the bidders. Bidders are requested to note that they should necessarily submit their financial bids in the BOQ format provided and no other format is acceptable. Bidders are required to download the BOQ file, open it and complete the coloured (Unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have

been completed, the bidder should save it and submit it online, without changing the file name. If the BOQ file is found to be modified by the bidder, **the bid will be SUMMARILY REJECTED.**

- 6) The server time (which is displayed on the bidders' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
- 7) All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128 bit encryption technology. Data storage encryption of sensitive fields is done. Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid openers public keys.
- 8) The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- 9) Upon the successful and timely submission of bids, (i.e. after clicking "Freeze Bid submission" in the portal) the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.
- 10) The bid summary has to be printed and kept as an acknowledgement of the submission of the bid. This acknowledgement may be used as an entry pass for any bid opening meetings.
- 11) Department or Service Provider is not responsible for any failure such as a bad internet connection or power failure outside of their control. The bidder is responsible to ensure they have sufficient time to submit an electronic bid prior to closing date and time including the payment of any fees including the Bid security and getting e-receipt. In case of a failure in the system within the control of the service provider that may affect a bidding process, the contracting authority on his sole discretion will postpone the closing time at least 24 hours from the time of system recovery to allow bidders sufficient time to submit their bids.
- 12) The TANTRANSCO may, at its discretion, extend the deadline for the submission of bids by amending the bidding document, in which case all rights and obligations of TANTRANSCO and bidders subject to the previous deadline shall thereafter be subject to the deadline extended.
- 13) The original proof of e-receipt/Undertaking in lieu of EMD/Undertaking towards Input Tax Credit or any other documents shall be furnished within 1 week on receipt of demand from TANTRANSCO. Failure to furnish the documents as called for will entail the bid to be treated as non-responsive bid and such offers will be summarily rejected.

Late Bids:

The Electronic bidding system would not allow any late submission of bids after due date and time as per server time.

Modification and withdrawal of bids:

- 1.0. Bidders may modify their bids online before the deadline for submission of bids.
- 2.0. In case a bidder intends to modify his bid online before the deadline, the bidder need not make any additional payment towards the cost of bid processing. For bid modification and consequential re-submission, the bidder is not required to withdraw his bid submitted earlier. Modification and consequential re-submission of bids is allowed any number of times. The last modified bid submitted by the bidder within the bid submission time shall be considered as the bid. For this purpose, **modification/withdrawal by other means will not be accepted.** The bidder may withdraw his bid by uploading his request before the deadline for submission of bids. However, if the bid is withdrawn, the re-submission of the bid is not allowed.
- 3.0. No bid may be modified after the deadline for submission of Bids.

ASSISTANCE TO BIDDERS:

- a) Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.
- b) Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24X7 CPP Portal Helpdesk.

B. GENERAL INSTRUCTIONS TO TENDERERS:

1.0. Tenderers are invited from Domestic Bidders only.

2.0. E-tenders shall be prepared and submitted strictly in accordance with the Instructions set forth herein. THE TENDERERS WHO DO NOT FULFILL THE "BID QUALIFICATION REQUIREMENTS" AS PER SECTION-III NEED NOT PARTICIPATE IN THE TENDER. OFFERS NOT SATISFYING THE "BID QUALIFICATION REQUIREMENTS" WILL BE SUMMARILY REJECTED.

3.0. The Tenderers shall upload the scanned copy of PAN card, GST and other relevant documents without fail.

4.0. SUBMISSION OF TENDER OFFER:

The Tenderer is expected to examine carefully all instructions detailed in the Specification and then to upload the scanned copy of proof for payment of EMD, all the required documents and BOQ without any omissions.

5.0. SINGLE PART TENDER:

5.1. The E-Tenders shall be in Single Part as detailed below.

a) Proof for payment of EMD / Exemption from payment of EMD,

b) All required technical and commercial documents including documentary evidences to satisfy the Bid Qualification Requirement

c) PRICE BID (BOQ)

5.2. If the tenderer finds any ambiguity in any of the terms and conditions stipulated in this specification, he shall get it clarified from the Chief Engineer/Transmission, 4th Floor, Southern Wing, TANTRANSCO Building, 144, Anna Salai, Chennai - 600 002. If this is not done and subsequent to the opening of the tenders, it is found that the doubt, about the meaning or ambiguity in the interpretation, if any of the terms and conditions stipulated in the specification are raised by the tenderer either in this tender or by a separate letter, the interpretation or clarification issued by the Chief Engineer/ Transmission, Tamil Nadu Transmission Corporation Limited, Chennai-2 on such terms and conditions shall be final and binding on the tenderer.

5.3. The tender documents submitted shall be serially numbered.

5.4. All information in the tender offer shall be in ENGLISH only. All tender offers shall be prepared by typing or printing in the formats enclosed with the specifications. All information in the tender offer shall be in ENGLISH only. It shall not contain interlineations, erasures or over writings except as necessary to correct errors made by the tenderer. Such erasures or other changes in the tender document shall be attested by the person signing the tender offer.

5.5. The tender offer shall contain full information asked for in the accompanying schedules and elsewhere in the specification.

5.6. Tenderer shall bear all costs associated with the preparation and uploading of bid and the PURCHASER will in no case be responsible or liable for these costs.

5.7. No offer shall be withdrawn by the tenderer in the interval between the deadline for submission and the expiry of the period of validity specified/extended validity of the tender offer.

5.8. The tenderers are requested to furnish the exact location of the Registered Offices with detailed postal address and Pin code, Telephone and Fax nos. etc., in their tender so as to arrange inspection by the TANTRANSCO, if considered necessary.

5.9. Telex/Fax/E-Mail offers will not be entertained and will be rejected.

5.10. ONLY MANUFACTURERS (or) Licensed/Authorised Channel Partner of OEM must quote. If the bids are received through Consortium, the same will not be considered and the bids will be rejected.

5.10.1. CHANNEL PARTNER:

A Channel Partner is a company that partners with a manufacturer to market and sell manufacturer's products, services or technologies. Channel partners may be Distributors, Dealers, Vendors,retailers, System Integrator (or) Value-added resellers and other such organizations.

In case of Channel Partner, proof for manufacture by the OEM, Channel Partner/Dealership certificate or any document towards proof of Channel Partners and undertaking by the OEM for Total Backup Guarantee as in Annexure-IV shall be furnished.

- 5.11 The Rate contract shall be finalized for a period of one year from the date of award of contract of tendered quantity or till completion of supplies, erection and commissioning.
- 5.12 The quantity indicated in schedule of requirement is approximate. The indent will be placed subsequently as and when there is requirement, up to the last date of validity of rate contract. The quantity finally ordered may vary to the extent of twenty five percent either way of the approximate quantity indicated in the schedule of requirement. The purchaser reserves the right to issue any number of indents for supply of materials during the rate contract period.
- 5.13 The tenderer should quote a minimum of 20% of tendered quantity, and the offer shall be summarily rejected who quotes a lesser quantity than prescribed. In the event of floating tender for procurement of more items of similar materials of various sizes or ratio etc., 20% of tendered quantity of each quoted items shall be considered for arriving at minimum quantity.

6.0. OPENING OF BID:

6.1. The Tender Opening Authorities will open all the Bids received, online at scheduled date and time and this could be viewed by bidders online on **08.06.2022 at 15.00 Hrs.** In the event of the specified date of Bid Opening being declared a holiday for the Tender Inviting Authority, the bids will be opened at the appointed time and location on the next working day.

6.2. In all cases, the amount of Earnest Money Deposit and validity of the bid shall be scrutinized. Receipt of original instrument of Earnest Money Deposit shall be confirmed by the Tender Inviting Authority. Thereafter, the bidders' names and such other details as the Tender Inviting Authority may consider appropriate, will be recorded as bid opening summary and the same will be uploaded on the e-procurement portal.

6.3. The Bidders' names, the Bid prices, the total amount of each Bid, Bid modifications and withdrawals, the presence or absence of Bid security, and such other details as the Tender Inviting Authority may consider appropriate, will be recorded as bid opening summary and uploaded by the Tender Inviting Authority on the e-procurement portal. No bid shall be rejected at bid opening. Any bid price, which is not submitted through the e-procurement system, will not be taken into account in Bid Evaluation.

6.4. The Tender Opening Authority shall prepare minutes of the Bid opening, including the information disclosed to those present in accordance with the above Sub-clause 6.3 and upload the same for viewing online.

6.5. The duly authorized representatives of the tenderers who are present shall sign the tender opening register.

7.0. PROCESS TO BE CONFIDENTIAL:

7.1. Information relating to the examination, clarification, evaluation, and comparison of Bids and recommendations for the award of a contract shall not be disclosed to Bidders or any other persons not officially concerned with such process until the award to the successful Bidder has been announced. Any effort by a Bidder to influence the Tender Inviting Authority's processing of Bids or award decisions may result in the rejection of his Bid.

8.0. CLARIFICATION OF BIDS:

8.1. To assist in the examination, evaluation, and comparison of Bids, the Tender Inviting Authority may, at his discretion, ask any Bidder for clarification of his Bid, including breakdowns of the unit rates. The request for clarification and the response shall be by e.mail, but no change in the price or substance of the Bid shall be sought, offered, or permitted except as required to confirm the correction of arithmetic errors discovered by the Tender Inviting Authority in the evaluation of the Bid in accordance with Clause 11.

8.2. Subject to sub-clause 8.1, no Bidder shall contact the Tender Inviting Authority on any matter relating to his bid from the time of the bid opening to the time of the contract is awarded. If the Bidder wishes to bring additional information to the notice of the Tender Inviting Authority, he should do so in writing or E-mail.

8.3. Any effort by the Bidder to influence the Tender Inviting Authority in the bid evaluation, bid comparison or contract award decisions may result in the rejection of the Bidder's bid.

8.4. The TANTRANSCO will examine the tender offers to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed and whether the offers are generally in order.

8.5. Prior to the detailed evaluation, the TANTRANSCO will determine the substantial responsiveness of each offer to the Bidding Documents.

8.6. "Attempt by any tenderer to bring to bear extraneous pressure on the tender accepting authority shall be the sufficient reason to disqualify the offer of the tenderer".

8.7. The Tender offers shall be deemed to be under consideration immediately after they are opened and until such time official intimation of award/rejection is made by the TANTRANSCO to the tenderers. While the offers are under consideration, tenderers, and/or their representatives or other interested parties are advised to refrain from contacting by any means, the TANTRANSCO and/or TANTRANSCO's employees/representatives on matters related to the offers under consideration.

8.8. Mere submission of any Tender offer connected with these documents and Specification shall not constitute any agreement. The tenderer shall have no cause of action or claim, against the TANTRANSCO for rejection of his offer. The TANTRANSCO shall always be at liberty to reject or accept any offer or offers at its sole discretion and any such action will not be called into question and the tenderer shall have no claim in that regard against the TANTRANSCO.

8.9. CORRECTION OF ERRORS:

The e- Procurement system automatically calculates the total amount from the unit rates and quantities and the system also automatically populates the amount in words from the amount in figures and therefore there is no scope of discrepancy and need for arithmetic correction.

9.0. EXAMINATION OF BIDS AND DETERMINATION OF RESPONSIVENESS:

9.1. Prior to the detailed evaluation of Bids, TANTRANSCO will determine whether each Bid (a) meets the eligibility criteria, (b) has been properly signed, (c) is accompanied by the required securities and documents and (d) is substantially responsive to the requirements of the Bidding documents.

9.2. A substantially responsive Bid is one which conforms to all the terms, conditions and specifications of the Bidding document, without material deviation or reservation. A material deviation or reservation is one (a) which affects in any substantial way the scope, quality, or performance of the works; (b) which limits in any substantial way, inconsistent with the Bidding documents, the TANTRANSCO's rights or the Bidder's obligations under the Contract; or (c) Whose rectification would affect unfairly the competitive position of other Bidders presenting substantially responsive Bids.

10.0. CURRENCY FOR BID EVALUATION:

The Currency of the bid is in Indian Rupees.

11.0. EVALUATION AND COMPARISON OF BIDS:

11.1. "The tender will be evaluated strictly as per Tamil Nadu Transparency in Tenders Act 1998 and the Tamil Nadu Transparency in Tender Rules 2000 and subsequent amendments thereof till date".

The Tender Inviting Authority will evaluate and compare only the Bids determined to be substantially responsive in accordance with Clause 9.

11.2. The tender offers received and accepted will be examined to determine whether they are in complete shape, all data required have been furnished, the tender offer is properly signed and the offers are generally in order and the tender offer conforms to all the terms and conditions of the specification without any deviation.

11.3. For the purpose of evaluation of the tender offers, the following factors will be taken into account:

a) The rate of CGST, SGST, and IGST as applicable both in percentage and amount shall be indicated in the offer along with HSN code.

b) The evaluated price shall be arrived in compliance with the provision of GST on the Transaction value i.e. (Ex works price + Freight and Insurance) + GST. Import of goods would be treated as inter state supplies and would be subject to IGST in addition to applicable customs duty.

c) Since GST is enacted wherein all taxes & duties are subsumed, price evaluation shall be inclusive of applicable GST in all cases, i.e. even if the bidders are only within the State or outside state or bidders are within the State and outside TN.

d) The rates quoted by the eligible lowest tenderer in the open tender Rate Contract Scheme will be compared with the prevailing market rate and the rates of previous period and if the Tender Accepting Authority is of the view that the quoted rates are too high, the rates will be negotiated and the rate will be determined. All eligible bidders who accept the rate will be enlisted.

f) No Price preference will be extended in evaluating the tenders.

g) The bid evaluation shall be done as per Tamilnadu Transparency in Tenders Act 1998 and Tamilnadu Transparency in Tender Rules 2000 and subsequent amendments.

11.4. Evaluation of the tender will be done for, 1 No. Transformer Panel (LV) +1 No. Feeder Panel + 1 No. Bus Coupler Panel with bus raiser

The unit FOR (D) value will be arrived and evaluation will be carried out as detailed above.

From these arrived rates, the lowest offer (L1 Tenderer) will be arrived.

11.5. EVALUATION AND AWARD OF TENDERS IN SPECIAL CASES: **Procurement in Special Cases-**

- 11.5.1 In the case of purchase of goods where the quantity offered at the lowest price is less than the total quantity required, the Tender Accepting Authority may, after placing orders with the lowest evaluated tenderer for the entire quantity offered by such tenderer subject to his ability to supply, adopt either or both of the following procedures to procure the balance quantity.-
- 11.5.2.a Negotiate with the next lowest tenderers in strict ascending order of evaluated price and require them to match the price offered by the lowest evaluated tenderer and place orders until the entire quantity required is ordered;
or
- 11.5.2.b Require all the other eligible tenderers who participated in the tender and offered a price higher than that offered by the lowest evaluated tenderer, to submit sealed offers of the quantity they would be willing to supply at the price quoted by the lowest evaluated tenderer, and thereafter place orders for the remaining required quantity with all those who match the lowest evaluated price such that those who bid lower prices in the original tender get a higher priority for supply.
- 11.5.3.a In case the bidders other than the lowest evaluated bidder fail to agree to accept the lowest price or the total quantity offered by them at the price quoted by the tenderer with lowest evaluated price is less than the required quantity, the Tender Accepting Authority may place orders for remaining required quantity at different rates with different suppliers in the ascending order of evaluated price until the entire quantity required is covered:
- 11.5.3.b Provided that, where different quantities have to be procured at more than one price from one or more tenderers, the Tender Accepting Authority may decide not to procure beyond a price considered economical although the entire quantity originally stated to be required in the tender documents is not ordered.
- 11.5.4. In cases where, the Tender Accepting Authority such as Tamil Nadu Electricity Board, Tamil Nadu Civil Supplies Corporation, Project Director, Integrated Child Development Scheme (ICDS) [and Tamil Nadu State Transport Corporations] is of the view that the commodity to be purchased is so vital in nature and the failure in supply would affect the public interest and that it is necessary to have more than one supplier, the Authority may place orders on the tenderer quoting the lowest evaluated price for not less than 60% of the quantity covered in the tender at the price quoted by him and place orders for the remaining quantity on the tenderers quoting the next lowest evaluated prices at the lowest evaluated price and shall specify this in the tender documents.

12.0. PURCHASE PREFERENCE:

12.1. Purchase preference may be extended to the Domestic enterprises, Government departments, Public Sector Undertakings, Statutory Boards and other similar institutions as per the provisions in 30-A & 30-B of Tamil Nadu Transparency in Tender Rules 2000 as detailed below.

12.2. PURCHASE PREFERENCE TO DOMESTIC ENTERPRISES:

In case of procurement of goods or services, where it is possible for the procuring entity to divide the award of tenders to more than one supplier or service provider, the tender document shall clearly indicate that upto **twenty five percent** of the total requirement in the procurement may be awarded to domestic enterprise, not being the lowest tender, in respect of only goods manufactured or produced or services provided or rendered by them, if the following conditions are satisfied:-

- (a) the lowest tender is not a domestic enterprise;
- (b) the preferential award shall extend only to the lowest tender among the domestic enterprises who are substantially responsive and technically qualified; and
- (c) Such domestic enterprise is willing to match the price of the lowest tender.

12.3. PURCHASE PREFERENCE TO GOVERNMENT DEPARTMENTS, PUBLIC SECTOR UNDERTAKINGS, STATUTORY BOARDS AND OTHER SIMILAR INSTITUTIONS:

In case of procurement of goods or services, where it is possible for the procuring entity to divide the award of tenders to more than one supplier or service provider, the tender document shall clearly indicate that upto **forty percent** of the total requirement in the procurement may be awarded to Government departments, Public Sector Undertakings, Statutory Boards and other similar institutions as may be notified by the Government, in respect of only of goods manufactured or produced or services provided or rendered by them, if such tenderer is willing to match the price of the lowest tender.”

12.4. In case of a single procurement, the total procurement under the above two provisions shall not exceed forty percent of the total requirement in that procurement.

13.0. VALIDITY:

13.1. The tender offer shall be kept valid for acceptance for a period of 180 days from the date of opening of offers. The offers with lower validity period are liable for rejection.

13.2. Further, the tenderer shall agree to extend the validity of the Bids without altering the substance, and prices of their Bid for further periods, if any required by the TANTRANSCO.

14.0. RIGHTS OF THE TANTRANSCO:

Notwithstanding anything contained in this specification the TANTRANSCO reserves the right to:

- a. accept the lowest or any other tender,
- b. revise the quantities at the time of placing of orders. TANTRANSCO reserves the right to release additional quantity order on or before the last date of validity of Annual Rate Contract order subject to ensuring that there is no declining trend in price of equipments/materials without getting specific concurrence from the supplier.
- c. reject any or all the tenders or cancel without assigning any reasons thereof,
- d. to split the Tender Quantity and place orders on one or more than one Firm to meet the delivery requirements.
- e. to relax or waive or amend any of the conditions stipulated in the tender specification wherever deemed necessary in the interest of the TANTRANSCO.

- f. Recover losses if any sustained by TANTRANSCO, from the supplier who pleads his inability to supply, and backs out of his obligation after award of contract. The Security Deposit cum Performance Guarantee paid shall be forfeited.
- g. to cancel the orders for not keeping up the execution/delivery schedule.
- h. In the event of the documents furnished with the offer being found to be bogus or the documents contain false particulars, the EMD paid by the tenderers will be forfeited in addition to blacklisting them for future tenders/contracts in TANTRANSCO.
- i. To revoke the rejection of the tenderer, if any within the validity period of the bid for further evaluation. A consent by the tenderer shall be uploaded along with the bid.
- j. After negotiation with the tenderer and before passing the order accepting a tender, if the tender accepting authority decides that the price quoted by such tenderer is high, the tender is liable for rejection.

15.0. DEVIATIONS:

15.1. The tenderer shall furnish, if there are any deviations in the Commercial and Technical terms in the Schedule – C1 and C2 Annexed. **Deviations mentioned elsewhere will not be considered.** If deviations are not furnished, it will be construed that the tenderer is accepting all terms specified in the specification. Similarly if any deviations are furnished in the Schedules- C1 and C2, it will be construed that these are the only deviations and the tenderer is accepting all other terms of the specification and the offer will be taken for evaluation accordingly.

15.2. THE OFFERS OF THE TENDERERS WITH DEVIATIONS IN COMMERCIAL TERMS OF THE TENDER WHICH COULD NOT BE ACCEPTED WILL BE REJECTED.

15.3. NO ALTERNATIVE OFFER WILL BE ACCEPTED.

16.0. APPEAL :

Any tenderer aggrieved by the order passed by the Tender Accepting Authority under Section-10 of the Tamil Nadu Transparency in Tenders Act 1998 may prefer an appeal to Government within 10 (Ten) days from the date of receipt of order.

17.0. BAR ON JURISDICTION :

Save as otherwise provided in the Tamil Nadu Transparency in Tenders Act, 1998 no order passed or proceedings taken by any officer or authority under this Act shall be called in question in any court and no injunction shall be granted by any court in respect of any action taken or to be taken by such officer or authority in pursuance of any power conferred by or under this Act.

SECTION : VI – COMMERCIAL

1.0. SCOPE:

1.1. The scope of supply includes manufacture, inspection, testing, packing, forwarding, insuring and delivery of the Equipments detailed herein, at our GCC stores anywhere in Tamil Nadu.

2.0. PERIOD OF CONTRACT & PLACING OF ORDERS ON RATE CONTRACT:

i) The period of rate contract is for one year from the date of award of contract. The TANTRANSCO reserves the right to split and place orders for the above items on different tenderers. The TANTRANSCO reserves the right to vary the quantity finally ordered to the extent of 25% either way of the requirement indicated in the tender documents. It is not binding on the TANTRANSCO to accept the lowest or any tender.

ii) The award of contract will be issued to the successful tenderers with all TANTRANSCO's terms and conditions, duly indicating the approved unit rates. The approved rates will be FIRM and valid for one year from the date of receipt of the contract.

3.0. PRICE:

3.1. The Tenderers are requested to quote FIRM price only and variable price will not be accepted. The unit price for supply of goods shall remain valid during the entire period of one year from the date of award of Rate Contract.

3.2. The Tenderers shall quote the Ex-works price, Packing and Forwarding, Freight and Insurance charges **with applicable rate of GST** separately for delivery to TANTRANSCO Stores anywhere in Tamil Nadu. A format for price is given in Schedule 'A'.

3.3. It is the responsibility of the Tenderer to make sure about the correct rates of duty/tax leviable on the materials at the time of tendering. If the rates assumed by the Tenderers are less than the current rates prevailing at the time of tendering, the TANTRANSCO will not be responsible for the mistake.

3.4. The tenderer should quote their rates taking into account the (Input Tax Credit (ITC) relief available to them on account of GST already paid. An undertaking to this effect may be furnished along with the tender as per Schedule-H enclosed to specification. The tenderers shall upload a scanned copy of an Undertaking towards ITC in a non-Judicial stamp paper of value not less than Rs.100/- (Rupees Hundred only) in the form as per Schedule-H.

3.5. The successful tenderer shall give an undertaking to the effect that if lower prices are offered to anyone else during the period of one year from the date of order, the same benefit shall be passed on to TANTRANSCO.

4.0. GOODS AND SERVICES TAX [GST] :

4.1. The bidders should have registered under GST Act and furnish GSTIN. In the event of contractor is within TN, SGST & CGST shall apply and if the contractor is outside TN, IGST shall apply.

4.3. The tenderer who opt for composition scheme shall submit the documentary evidence for having registered under composition scheme and shall not, claim GST in their invoices.

4.4. The Goods and Services Tax will be paid extra as applicable. The amount of CGST, SGST, and IGST as applicable shall be indicated in percentage payable and amount separately in the tender offer.

4.5. The TANTRANSCO has been registered as a dealer under GST Act 2017 (Registration No. **33AADCT4780AFZA**). The GST Registration No of TANTRANSCO (for TDS) is 33CHET12024F1DI.

4.6. In case of delayed delivery, the GST rate prevailing on the date of actual delivery or on the last day of the contractual delivery period whichever is LESS will be admitted. For both the cases, the supplier shall furnish documentary evidence while submitting the bills for payment.

4.7. It is the responsibility of the tenderer to make sure about the correct rates of GST leviable on the material at the time of tendering. If the rates assumed by the Tenderer are less than the current rates prevailing at the time of tendering, the TANTRANSCO Ltd will not be responsible for the mistake. If the rates assumed by the tenderer are higher than the current rates prevailing at the time of tendering, the rate prevailing at the time of tendering will only be paid.

4.8. Any increase in GST rate consequent to the suppliers coming into different slab during the execution of the contract shall have to be taken into account and the all inclusive firm price shall be quoted accordingly by the Tenderers. Any Variation in GST rate due to statutory Variation within the contract delivery date shall be considered by the TANTRANSCO Ltd.

4.9. GST @ 18% or as applicable from time to time will be applied and recovered on LD, forfeiture of EMD/SD.

GST recovery on above is eligible for Input Tax Credit (ITC).

4.10. Tax Deducted at Source (TDS):

TDS @ 2% on GST will be deducted on the taxable value.

4.11. TCS under Income Tax Act:

The eligible suppliers shall claim Invoices with TCS u/s206C(1H) of Income tax Act at the rate of 0.075% upto 31.03.2021 and at the rate of 0.1% (or such other rates as may be notified) from 01.04.2021 onwards.

4.12. GST – E-Way Bill:

It is responsibility of Supplier/Contractor to ensure the delivery at the destination stores/sites of TANTRANSCO. Therefore, it is the responsibility of the Supplier/Contractor or their transporters to generate e-way bill before transporting goods for delivery at TANTRANSCO's premises.

The Government of TamilNadu had notified that e-way bill is required to be generated for intra-state movement (within the state of TamilNadu) for consignment value exceeding **Rs.1,00,000** with effect from 2nd June 2018. It may kindly be noted that E-Way bill on interstate movement of goods had been introduced with effect from 1st April 2018 and is required to be generated for movement of goods having consignment value exceeding Rs.50,000. (please refer webpage portal <http://ewaybillgst.gov.in> for procedure and generation of E-way bill).

4.12. GSTR-2A of TANTRANSCO will be verified to ensure the remittance of GST to Govt., by the supplier in respect of this PO. If the GST remitted by the supplier is found lesser than that claimed from TANTRANSCO, the excess GST paid by TANTRANSCO will

be recovered from the supplier, duly adhering regular procedures. The supplier is requested to file the GST returns promptly to avoid delay in processing/payment of invoices. In case of non-filing of GSTR1 by supplier, the SD, EMD and other payments, if any, due to the supplier may be withheld.

5.0. FREIGHT AND INSURANCE:

The accepted prices are inclusive of Freight and transit Insurance.

5.1. It is the responsibility of the supplier to deliver the equipment safely and in time.

5.2. The Consignment on receipt at destination Stores/Site shall be unloaded by the supplier at free of cost.

5.3. The equipment have to be despatched freight paid and duly insured at suppliers risk and cost from Warehouse to Warehouse. The supplier shall arrange for all the materials being supplied by them through any of the Nationalised Insurance Companies. The Insurance should cover the transit risks from the Ex-works factory to destination and also for storage risks for 60 days after the receipt of materials at site. The damages, if any during transport will be intimated within 30 days from the date of receipt of materials at stores. The damages during storage if any will be intimated to you within 30 days of such occurrence.

5.4. The non-arrival of goods at destination station/site will be reported to the Supplier within 3 months from the date of despatch.

5.5. The TANTRANSCO will take open delivery in the event of apparent damage to the cases from carriers and obtain open delivery certificate, lodge a preliminary claim with the carriers/under registered A/D card with a copy to the supplier. The open delivery certificate with A/D will then be forwarded to the supplier, for settlement of claim with the insurance under writers.

5.6. It will be the responsibility of the supplier to replace the defective/damaged materials to make good the shortages and other losses in transit free of cost and to lodge and settle the insurance claims with the insurance under writers/carriers.

5.7. If there is undue delay in respect of the supply of materials due to the delay caused by the carrier, the supplier is responsible for such delay in all respects.

5.8. No documentary evidence need to be produced in support of freight and insurance charges. The Freight and Insurance charges will be firm throughout the contract.

6.0. PACKING AND FORWARDING:

The equipment and all its accessories shall be securely packed and despatched, freight paid, duly insured, at supplier's risk and cost. The packing may be in accordance with the manufacturer's standard practice. The supplier is responsible for ascertaining the facilities that exist for Road Transport to site. Each package shall be clearly marked and contain detailed packing list, such as gross weight, net weight etc. The supplier is solely responsible for any loss or damage during transport. The despatch of materials shall be made only after the approval of test certificates by the TANTRANSCO. **The equipment/Materials shall be unloaded at Destination Stores/Sites by the supplier free of cost.**

7.0. PAYMENT:

7.1. Payments will not be made for equipments/materials damaged during transit. All defective materials shall be replaced by the supplier free of charge.

7.2. Payments for the supplies will be made by Online mode only. The bank charges involved in making the payment will be to the account of the Tenderer.

The Tenderer has to furnish the following details of the Bank account to which the payment be credited.

1. Name of the Account Holder
2. Name of the Bank
3. Branch
4. Account No
5. IFSC code of the Branch

7.3. (a) For the equipments/materials delivered within the contractual delivery period :

100 % of the all inclusive price of the equipment/materials will be paid **for SSI units (Small and Micro scale) within 45 days and for Non-SSI units within 90 days from the date of receipt of materials at good condition at site after** deducting recoveries if any.

(b) For the equipments/materials delivered beyond the contractual delivery period:

100 % of the all inclusive price of the equipments/ materials will be paid **for SSI units (Small and Micro scale) within 45 days and for Non-SSI units within 90 days from the date of receipt of materials at good condition at site** after deducting the appropriate amount of L.D. of each consignment and other recoveries if any.

7.4. In the event of TANTRANSCO failing to up keep the stipulated time frame for releasing payment to SSI units and Non-SSI units, simple interest will be paid for the delayed period at SBI three months MCLR.

The simple interest shall be calculated for the delayed period by adopting the 3 months MCLR of SBI prevailed at the time of signing of agreement and in the cases where no agreement is signed, only PO is issued, the date of the PO shall be taken as base date to ascertain the interest rate.

7.5. In case of delay in supply, the materials will be accepted subject to the following conditions.

- (a) There should be no declining trend in price
- (b) Payment will be released as per the recent purchase order rates or lowest rates obtained during the recent tenders opened subject to levy of liquidated damage for belated supplies.
- (c) TANTRANSCO reserves the right to accept or reject the delayed supplies without assigning any reason therefore and take action as per the other terms and conditions of this specification.

7.6. The bills for payment will be passed only after the approval/acceptance of the following:

- (a) Security Deposit Cum Performance Bank Guarantee for 5% value of Purchase Order.
- (b) Test Certificate.
- (c) Supply of approved drawings, Instruction manuals, etc., as per Section-VI Technical of this Specification.
- (d) Undertaking towards Jurisdiction for legal proceedings.

7.7. The supplier should despatch only after getting despatch instruction. If the supplier despatches the materials without the prior approval of the purchaser, then the purchaser shall not be responsible for any demurrage or wharfage or both and only the supplier should bear any expenditure arising out of such unapproved despatches.

8.0. SECURITY DEPOSIT CUM PERFORMANCE GUARANTEE :

8.1. The successful tenderer will have to furnish **3% value of Purchase Order** as Security Deposit cum Performance Guarantee in the form **of electronic mode of payment or DD/Banker's Cheque/irrevocable Bank Guarantee**. Security Deposit will include the Earnest Money Deposit already paid.

8.2. The Security Deposit cum Performance Bank Guarantee will be refunded to the supplier only if the contract is completed to the satisfaction of the purchaser. If the purchaser incurs any loss or damages on account of breach of any of the clauses or any other amount arising out of the contract becomes payable by the supplier to the purchaser, then the purchaser will in addition to such other dues that he shall have under the law, appropriate the whole or part of the security deposit cum Performance Bank Guarantee and such amount that is appropriated will not be refunded to the supplier.

8.3. The successful tenderer should furnish a Security Deposit cum performance guarantee and shall be valid for a period of 36 months from the anticipated date of receipt of last consignment of goods/materials at site in good condition. In case of delay in supply, the Security Deposit cum Performance Bank Guarantee should be extended suitably.

The Security Deposit cum Performance Guarantee will be released on expiry of guarantee period after ensuring that defects/damages during the guarantee periods are rectified / replaced.

The successful tenderer will have to furnish the Security Deposit cum Performance Guarantee within 30 days from the date of receipt of Purchase Order. The Security Deposit cum Performance Guarantee will not carry any interest.

In the event of failure to remit Security Deposit cum Performance Guarantee within, the prescribed period, EMD will be forfeited and order be cancelled. The award may be made to L2 tender. Belated payment of Security Deposit cum Performance Guarantee will not be accepted.

- 5.4.** Failure to comply with the terms regarding Security Deposit cum Performance Guarantee set out in the purchase order within the stipulated time, the successful tenderer will entail cancellation of the purchase order without any further reference to the supplier.

The successful Tenderer, who is having Permanent EMD backs out from the payment of Security Deposit Cum Performance Guarantee, an equivalent amount of EMD shall be forfeited from their PEMD amount.

9.0. DELIVERY:

9.1. The indents for the quantity will be given by the Chief Engineer / Transmission 45 days in advance, based on the actual requirements, duly indicating the due date of delivery. Indents for subsequent quantities shall be based on the requirement, timeliness of supply by the bidder and feedback on performance from the field and if possible, on turn basis also. This is purely at the discretion of Chief Engineer / Transmission.

9.2. The delivery period will not normally be extended. Hence, all efforts shall be taken to deliver the materials within contractual delivery period.

9.3. The above delivery shall be guaranteed by you under liquidated damages clause governed by this specification.

The date of actual receipt of materials will be reckoned as the date of delivery for the liquidated damage purpose.

The date of receipt of last component of the main equipment will be reckoned as the date of delivery for the purpose of calculation of liquidated damage for delay in delivery, when the main equipment and accessories are delivered in piece meal.

9.4. Delivery indicated in the technical schedule shall have to be adhered to. If any other delivery period is indicated the tender is liable for rejection.

10.0. QUANTITY ALLOCATION:

At the time of issuing indent for supply of materials, TANTRANSCO reserves the right to allocate the quantity after ensuring the manufacturing capacity, ability to supply, quantity offered and past performance.

11.0. LOSS OR DAMAGE:

11.1. External damages and/or shortages that are prima facie, the results of rough handling in transit or due to defective packing will be intimated within one month from the date of receipt of the materials at site. Internal defects, damages or shortages of integral parts, which cannot ordinarily be detected on a superficial visual examination, though due to bad handling in transit or defective packing, would be intimated within 2 months from the date of receipt of materials. In either case, the defective materials shall be replaced/rectified by the supplier, free of cost as per the Clause of Replacement of Defective/Damaged materials of this specification.

11.2. If during the period of supply, it is found that goods already supplied are defective in material or workmanship or do not conform to specification or are unsuitable for the purpose for which they are purchased, then it will be open to the purchaser either to reject the goods or repudiate the entire contract and claim such loss that the purchaser may suffer on that account or require the supplier to replace the defective goods, free of cost.

11.3. Similarly, if during the guarantee period any of the goods found to be defective in materials or workmanship or do not conform to specification, it will be open to the purchaser either to repudiate the entire contract and claim damages or accept such parts of the goods

that are satisfactory and require the supplier to replace the balance or to claim compensation for the entire loss sustained by the purchaser on that account.

11.4. In the event of supplies being received damaged or any shortages at the destination stations, the cost of such materials, GST (if payable) and other charges payable thereof will be paid only proportionate to the value of materials received in good condition, unless the damaged goods or short supplies are made good free of cost by the suppliers.

11.5. For all legal purposes, the materials shall be deemed to pass into the TANTRANSCO's ownership at the destination Stores, where they are to be delivered and accepted.

12.0. LIQUIDATED DAMAGES AND PENALTY:

12.1. The delivery as specified should be guaranteed by the supplier under the liquidated damages clause given below:

If the supplier fails to deliver the equipments/materials within the time specified in the contract or any extension thereof, the purchaser shall recover from the supplier as liquidated damages, a sum of HALF PERCENT (0.5%) of the contract price of the undelivered equipments/materials for each completed week of delay. The total liquidated damages shall not exceed TEN PERCENT (10%) of the contract price of the equipments/materials so delayed. Only the date of actual receipt of materials at stores will be reckoned as date of delivery for this purpose.

It should be noted that if a contract is placed on the higher tenderer in preference to the lowest acceptable tender in consideration of the offer of earlier delivery, the said contractor will be liable to pay the TANTRANSCO the difference between the contract rate and that of the lowest acceptable tender in case of failure to complete the supplies in terms of such contract within the delivery period specified in the tender and incorporated in the contract. This is without prejudice to other rights under the terms of contract.

12.2. Equipment will be deemed to have been delivered only when all its component parts and its accessories are also delivered. If certain components and accessories are not delivered in time the whole equipment will be considered as delayed unless, the missing parts are delivered. The Liquidated damages will also be levied for the quantity not supplied as is done for the delayed supplies. If supplies effected in part which could not be beneficially used by the TANTRANSCO (due to such incomplete supply), liquidated damage will be worked out on the basis of entire contract price of the such whole units which could not be beneficially used and not on the value of delayed portion.

12.3. If supplies to be rendered are made by the supplier beyond the period of delivery and they are accepted by the TANTRANSCO, such acceptance is without prejudice to TANTRANSCO's right to levy liquidated damages for the delay in supply.

12.4. If the ordered materials are not delivered, the purchaser shall recover from the supplier, as liquidated damages a sum equal to TEN PERCENT (10%) of the contract price of the equipments/materials undelivered besides forfeiture of security deposit Cum Performance Guarantee.

12.5. The suppliers are liable to pay the amount of loss sustained by the TANTRANSCO in the event of non-execution of orders, if any placed on them either in full or part to the satisfaction of the TANTRANSCO under the terms and conditions of contract and in the event of placing orders for such quantities on some others at a higher price.

12.6. Tenderers not giving clear and specific acceptance to the above clauses are liable for rejection.

12.7. If there is any downward trend in prices on account of belated supplies, the tenderers have to accept the same with the levy of liquidated damages, for belated supplies.

The TANTRANSCO will also be at liberty to cancel the contract if the supply is not completed within the accepted delivery period notwithstanding the liquidated damages clause applicable for the belated supplies. Any charge for canceling the contract will not be accepted under any circumstances.

In the event of cancellation of contract or non completion of supply by the suppliers, then the short supplied items may be ordered fresh. The excess price if any between the original and new contract will be recovered from the original supplier from the amount due to the original supplier either from this contract or from any other contract.

12.8. GST ON LIQUIDATED DAMAGES:

a) Liquidated Damages: Liquidated Damages collected /recovered on inward supplies, i.e., purchase of goods and services will attract GST @18% and Liquidated Damages collected/recovered on taxable outward supplies will attract GST @18%. GST will be additionally recovered from the supplier in addition to the stipulated LD rates in the Purchase Order/ Contract.

b) GST rate on Forfeiture of EMD and Security Deposit cum Performance Guarantee: GST @18% will be collected additionally from the tenderer at the time of forfeiture of EMD and Security deposit cum Performance Guarantee.

c) The GST amount recovered from L.D, forfeiture of EMD/SD is eligible for Input Tax Credit (ITC) to the suppliers and thus no financial burden on suppliers.

13.0. FORCE MAJEURE:

13.1. If at any time, during the continuance of the contract, the performance in whole or in part, of any obligation under this contract, is prevented or delayed by reasons of any war, hostility, acts of public enemy, acts of civil commotion, strikes, lockouts, sabotages, fires, floods, explosions, epidemics, quarantine restrictions or other acts of God (herein after referred to as eventualities) then, provided notice of the happening of any such eventuality is given by the tenderer to the TANTRANSCO within 15 days from the date of occurrence thereof, neither party shall, by reasons of such eventuality, be entitled to terminate this contract nor shall have any claim for damages against the other in respect of such non-performance or delay in performance and deliveries under this contract, shall be resumed as soon as practicable after such eventuality has come to an end or ceased to exist.

13.2. Provided that if the performance in whole or part by the supplier on any obligation under this contract is prevented or delayed by reasons of any eventuality for a period exceeding 60 days, the TANTRANSCO may at its option terminate the contract by a notice in writing.

13.3. Power cut shall not be considered under the Force Majeure condition. The period of extension shall be decided only by the authority who placed the order after verifying the evidence for the cause of delay.

13.4. It is hereby specifically agreed that time is the essence of the contract. The termination of the contract as aforesaid shall not absolve the supplier/supplier of his liability to pay damages to the Corporation for the breach of the contract to deliver the goods or complete the performance of the contract within the time fixed by the purchaser/suppliers.

14.0. GUARANTEE:

14.1. The entire equipments should be guaranteed for satisfactory operation and good workmanship at least for a period of 36 (Thirty six) months from the date of receipt of materials at site in good condition.

14.2. Any defects noticed during this period shall be rectified free of cost to the TANTRANSCO within 2 (Two) months from the date of intimation of defect/failure. Irrespective of number of failures and repairs, the suppliers are responsible for free replacement of the defective materials. Such replaced components shall serve for a continuous period of 12 months from the date of re-commissioning and this shall be in addition to the guarantee provided for the equipment.

14.3. The incidental expenses, transport and freight charges for the replacement of defective materials within the guarantee period shall also be borne by the supplier till such time it serves a continuous period of 12 (Twelve) months as said above.

14.4. The tenderers shall guarantee among other things, the following

- i. Quality and strength of materials used.
- ii. Safe electrical and mechanical stresses on all parts of the equipments under all specified conditions.
- iii. Performance figures given by the tenderers in the Schedule of Guaranteed technical particulars.

15.0. REPLACEMENT OF DEFECTIVE/DAMAGED MATERIALS:

15.1. Notwithstanding anything contained in the above liquidated damages clause when the whole or part of the materials supplied by the supplier are found to be defective/damaged or are not in conformity with the specification or sample, such defects or damages in the materials supplied shall be rectified within two months from the date of intimation of defect/damage either at the point of destination or at the supplier's works, at the cost of supplier, against proper security and acknowledgement. In the alternative, the defective or damaged materials shall be replaced at free of cost within two months from the date of receipt of the intimation from the purchaser of such defects or damages. If the defects or damages are not rectified or replaced within this period, the supplier shall pay a sum towards liquidated damages as per liquidated damages clause given above, for the delay in rectification/replacement of the defects or damages from the date of receipt of intimation of the defect or damages.

15.2. If even after such rectification or replacement of the damaged or defective part, if the equipment materials ordered is not giving the satisfactory performance as per the contract, then it will be open to the purchaser either to reject the goods or repudiate the entire contract and claim such loss sustained by the TANTRANSCO.

15.3. Notwithstanding any other remedies available, the purchaser shall be entitled to dispose off the defective/damaged materials in 'as is where is condition' without further notice, if the contractor/supplier fails to rectify the defect and /or replace the damaged materials and / or fails to remove the defective/damaged materials within such period as may be notified by the purchaser through notice and the sale proceeds of such disposal shall be appropriate towards the dues to the TANTRANSCO such as liquidated damages, ground rent etc. as may be determined by the purchaser.

16.0. FAILURE TO EXECUTE THE CONTRACT:

Suppliers failing to execute the order placed on them to the satisfaction of the TANTRANSCO under terms and conditions set forth therein, will be liable to make good the loss sustained by the TANTRANSCO, consequent to the placing of fresh orders elsewhere at higher rate, i.e. the difference between the price accepted in the contract already entered into and the price at which fresh orders have been placed. This is without prejudice to the imposition of Liquidated Damages and forfeiture of security deposit Cum Performance Guarantee.

17.0. NON-ASSIGNMENT:

The supplier shall not assign or transfer the contract or any part thereof without the prior approval of the purchaser.

18.0. EFFECTING OF RECOVERIES:

Any loss, arising due to non-fulfillment of this contract or any other contract, will be recovered from the Security Deposit held and or any other amount due to the supplier from the TANTRANSCO/TANGEDCO/TNEB from this Contract as well as from other contracts.

19.0. INCOME TAX AND GST NUMBER:

Tenderers shall furnish their Permanent Account Number (PAN) and GST Identification Number (GSTIN) details in their offer or other relevant documents without fail.

TDS on Income Tax will be recovered at the rates as applicable from time to time as per the notifications of GOI.

20.0. PATENT RIGHTS ETC :

The supplier shall indemnify the purchaser against all claims, actions, suits and proceedings for the infringement or alleged infringement of any patent, design or copy right protected either in the country of origin or in India by the use of any equipment supplied by the supplier other than for the purpose indicated by or reasonably to be inferred from the specification.

21.0. ARBITRATION:

The TANTRANSCO will not accept any arbitration in case of disputes arising in any respect under this contract. Any dispute arising out of this contract shall not be subject to arbitration under the provisions of Arbitration and Conciliation Act 1996 in the event of any dispute between the parties.

22.0. DEVIATIONS FROM SPECIFICATION:

No deviations in Commercial and Technical terms shall be acceptable.

23.0. TEST CERTIFICATES:

The test certificates in triplicate for the materials furnishing the results of the tests as per latest issue of IS/IEC shall be forwarded and got approved before the materials are despatched. In addition to the tests called for in the specification, the purchaser reserves the right of having such tests as he desires carried out at his own expenses to satisfy himself that the materials conform to the requirement of this specification. The materials may be rejected if the test results are not satisfactory.

24.0. RESPONSIBILITY:

The tenderer is responsible for safe delivery of the materials at the destination stores. The tenderer should include and provide for packing and secured protection of the materials so as to avoid damages or loss in transit.

25.0. MAXIMUM WEIGHTS AND DIMENSIONS OF PACKINGS:

25.1. The supplier is responsible to make sure about the facilities that exist for Road and Rail transport to site, the maximum packages which can be conveyed by the railways and crane lift available at the destination Railway station. The supplier is also responsible for any loss or Damage during transport and storage for 60 days.

25.2. Each case or package should be clearly marked and should contain detailed packing list.

26.0. INSPECTION:

26.1. The authorized representatives of the purchaser shall have access to the supplier's or sub-vendor's works at any time during working hours, for the purpose of inspecting the manufacture of the materials and for testing the selected samples from the materials covered by this specification. The supplier or the sub-vendor shall provide facilities for the above.

26.2. Tenderers are requested to furnish in their tenders the exact location of their factory with detailed address to enable inspection by TANTRANSCO if considered necessary.

26.3. Not less than 15 days advance intimation shall be given about the quantity of materials that will be ready for inspection by the TANTRANSCO's Officers/Third Agency authorized by the TANTRANSCO. The arrangement for inspection shall be made by suppliers in such a way that the delivery schedule is kept up. The materials shall not be despatched without instruction from TANTRANSCO.

27.0. COMPLETENESS OF TENDER:

The tender should be complete with all details of illustrative and descriptive literature and drawings. The tenderers shall furnish the complete technical details of the equipment. Information regarding the country of manufacture or origin of materials used in the manufacture of the articles should be furnished. The tenderer should include all minor accessories even though not specifically mentioned in this specification but which are essential for the completeness of the materials ordered.

The tenderer shall not be eligible for any extra charges in respect of such minor accessories though not included in the tender.

28.0. INTERCHANGEABILITY:

All similar parts and removable parts of similar items shall be interchangeable with each other.

29.0. QUANTITIES:

The quantities mentioned above are only tentative. The purchaser reserves the right to revise the quantities at the time of placing the order.

30.0. CLIMATIC CONDITIONS:

The materials are for use in Tamil Nadu and should be satisfactory for operation under tropical conditions in Tamil Nadu.

- a) The ambient temperature will be within the range of + 10 ° C to + 50 ° C .
- b) The altitude will be less than 1000 meters.
- c) The maximum atmospheric humidity will be in the range of 95%.
- d) Average Number of thunder storm days per annum is 65.
- e) Average Number of dust storm days per annum is 5.
- f) Average Number of rainy days per annum is 65.
- g) Average annual rainfall is 100 cm.

h) The climatic conditions are prone to wide variation in ambient condition and equipments offered under this specification shall be suitable for installation at any of the Sub-Stations in Tamil Nadu.

i) All electrical devices shall be given tropical and fungicidal treatment. Fog, smoke and mild acids are also present in the atmosphere.

31.0. ELECTRICITY RULES :

All works shall be carried out in accordance with the latest provisions of the Indian Electricity Act /Electricity Supply Act and the Indian Electricity Rules there-under unless modified by this specification.

32.0. MATERIALS AND WORKMANSHIP:

32.1. All materials, equipments and spare parts thereof shall be new, unused and originally coming from manufacturer's plant to the destination stores. Those including used, rebuilt or overhauled materials/equipments will not be accepted.

32.2. All the materials shall be of best class and capable of satisfactory operation in the tropics with humid atmospheric condition. Unless otherwise specified, they shall conform to the requirements of appropriate Indian Standards. Where these are not available, IEC and American/British Standards shall be followed.

32.3. The equipments should be designed to facilitate inspection and repair and to ensure satisfactory operation under atmospheric conditions prevailing at site and under sudden variations of load and voltages as may be met with under working conditions in the system including those due to faulty synchronizing and short circuits within the rating of the apparatus.

32.4. The design shall incorporate every reasonable precautions and provisions for the safety of all those concerned in the operation and maintenance of equipment.

32.5. All the equipments should operate without undue vibration and with the least practicable amount of noise.

33.0. RECOVERIES OF DUES :

The TANTRANSCO is empowered:

(a) To recover any dues against this contract in any bills/ Security Deposit Cum Performance Bank Guarantee / Earnest Money Deposit due to the suppliers either in this contract or any other contracts with TANTRANSCO/TANGEDCO/TNEB.

(b) To recover any dues against any other contract of the suppliers with TANTRANSCO/TANGEDCO/TNEB, with the available amount due to the suppliers against this contract.

34.0. PAST PERFORMANCE:

34.1. The intending tenderers shall furnish the documentary evidence with details of various Purchase Orders/placed on them during the last three years as on the date of Tendering in the proforma enclosed to the Tender Specification and also proof for having manufactured the tendered item and for their satisfactory performance from State Electricity Board.

34.2. The Bidders shall furnish copies of Balance Sheet, Profit and Loss Account for the years 2018-2019, 2019-2020 and 2020-2021 certified by the Auditor.

In case 2020-2021 accounts are not finalised, the bidders shall furnish annual turnover statement for the year 2020-2021 certified by Auditor.

In order to ensure the annual turnover criteria stipulated under Bid Qualification Requirement conditions, the bidders may also furnish the attested copy of Income Tax return filed by the bidders or the attested copy of enlistment certificate issued by the NSIC containing turnover details of the bidder for the respective period as required.

34.3. The Bidders shall furnish documentary evidence for the constitution of the firm such as Memorandum and Articles of Association, Attested copy of Registered Partnership Deed with details of Name, Address, Telephone, Electricity Board Service Connection No. of the manufacturing plants.

34.4. The details furnished by the tenderers shall be in complete shape and if it is found that any information is found omitted, suppressed, incomplete or incorrect, the same will be taken note of while dealing with the Tenderers in future.

35.0. TYPE TESTS :

Tenderers should furnish copy of type test reports along with offer as below:

Type test reports for the tendered material / equipment of their make in full shape should be furnished. The date of Type test report should be within Ten years (10 years) as on the last date of submission of bid as per relevant IS & IEC. Type test reports should have been issued by the Government Laboratory/ Government Recognised Laboratory/NABL Accredited Standard Laboratories/ International Laboratories.

The above type test reports should accompany the drawings of the material/equipments, duly signed under seal by the Institution who had issued the type test reports.

The original type test certificates shall be furnished for verification on request. The details of type test should also be furnished in the Schedule – F.

The Type test clause shall comply the guidelines of CEA May, 2020.

36.0. ERECTION AND COMMISSIONING:

The 33KV VCB will be erected departmentally. The supplier shall render necessary assistance in the erection and commissioning of One number breaker in each consignee circles at free of cost if required.

37.0. RAW MATERIALS:

It is the responsibility of the tenderer to make his own arrangement to procure the necessary raw materials required for the manufacture.

38.0. STORAGE CHARGES :

Storage charges for storing the equipment at the suppliers premises will not be paid to the supplier, under any circumstances.

39.0. JURISDICTION FOR LEGAL PROCEEDINGS (AFTER AWARD OF CONTRACT)

No suit or any proceedings in regard to any matter arising in respect of this contract shall be instituted in any court, save in the High Court, Madras, City Civil Court at Chennai or at the Court of small causes at Chennai. It is agreed that no other court shall have jurisdiction to entertain any suit or proceedings, even though, part of the cause of action might arise within their jurisdiction. In case, any part of cause of action might arise within the jurisdiction of any of the Courts in Tamil Nadu and rest within the jurisdiction of courts outside the Tamil Nadu, then it is agreed to between the parties that such suits or proceedings shall be instituted in a Court within the State of Tamil Nadu and no other court outside the State of Tamil Nadu shall have jurisdiction even though any part of the cause of action might arise within the jurisdiction of such courts. The successful tenderer shall furnish an undertaking in a non/Judicial stamp paper of Rs.100/= agreeing to the above condition.

SECTION – VII
TECHNICAL SPECIFICATION

TECHNICAL SPECIFICATION FOR 33 KV INDOOR SWITCHGEAR

- 1.0 SCOPE OF WORK
- 2.0 CODES & STANDARDS
- 3.0 PANEL CONSTRUCTION
- 4.0 CIRCUIT BREAKER
- 5.0 FUNCTIONAL REQUIREMENTS
- 6.0 SURGE SUPPRESSOR
- 7.0 CURRENT TRANSFORMER
- 8.0 POTENTIAL TRANSFORMER
- 9.0 COMPATABILITY WITH SCADA SYSTEMS
- 10.0 EQUIPMENT EARTHING
- 11.0 METERS
- 12.0 INDICATION, ALARMS & ANNUNCIATION
- 13.0 SELECTOR SWITCHES & PUSH BUTTONS
- 14.0 INTERNAL WIRING
- 15.0 TERMINAL BLOCKS
- 16.0 RELAYS
- 17.0 SPACE HEATERS
- 18.0 SOCKETS, SWITCHES & ILLUMINATION LAMPS
- 19.0 NAMEPLATES AND MARKING
- 20.0 SURFACE TREATMENT & PAINTING
- 21.0 APPROVED MAKES OF COMPONENTS
- 22.0 INSPECTION AND TESTING
- 23.0 DRAWINGS & DATA SUBMISSION
- 24.0 PACKING
- 25.0 SHIPPING
- 26.0 HANDLING AND STORAGE
- 27.0 QUALITY ASSURANCE
- 28.0 PROGRESS REPORTING
- 29.0 DEVIATION
- 30.0 ACCESSORIES & TOOLS
- 31.0 MANDATORY SPARES
- 32.0 TRAINING
- 33.0 COMMISSIONING SUPPORT

ANNEXURE – A - TECHNICAL PARTICULARS (DATA BY PURCHASER)

TECHNICAL SPECIFICATION FOR 33 KV INDOOR SWITCHGEAR

1.0.SCOPE OF WORK

The scope of bid envisages the Design, Engineering, Manufacture, Stage testing, Final Inspection and testing before supply, Supply and Delivery at site/Stores of 33 KV Single Bus 25KA, 1250 Amps, Indoor Vacuum Circuit Breaker (VCB) panels suitable for Feeder, Transformer and Bus coupler control with bus raiser and all accessories and auxiliary equipments and mandatory spares described herein and required for the satisfactory operation at various stores of TANTRANSCO. The panels shall be integratable towards remote monitoring and control using existing HMI SCADA and shall be compatible to the existing/proposed SCADA in TANTRANSCO. The system will transmit data to Chennai DCC SCADA system on real time with latest IEC protocol. Sub-station equipments like energy meters, relays etc which may have DNP 3.0, MODBUS/IEC 61850 protocols with Optical/RS485 port shall support the existing HMI SCADA with MODBUS protocol and compatible with proposed SCADA with IEC 61850 protocol to communicate with Master Station.

The Switchgear Panel shall conform in all respects to high standards of engineering design, workmanship and latest revisions of relevant standards at the time of offer. The purchaser shall have the right to reject any work or material which in his judgment is not in full accordance therewith.

The breakers should be as per the enclosed specification, GTP and single line diagram furnished in annexure.

Base channel frame of the switchgears with hardware. (The offered panel having inbuilt MS channel base frame are accepted and shall be as per type tested design. Grouting arrangements shall be provided. All hardware required for erection shall be supplied).

Programming software and communication cord for numerical relays.

Bidder should indicate the special tools and tackles (if any) required for maintenance of switchgear and its components and supply same at free of cost.

Bidder should supply the mandatory spares listed in the Technical specification at free of cost.

All relevant drawings, data and instruction manuals

2.0 CODES & STANDARDS

The Indoor Vacuum Circuit Breakers and its accessories like Instrument Transformers etc shall conform to the following standards with latest revisions and amendments thereof .

1	IEC-62271-100/IS 13118	High voltage Switchgear and Control Gear High voltage alternating current circuit breakers.
2	IEC-62271-200/IS 3427	Metal Enclosed Switchgear and Control Gear for rated Voltages above 1KV and upto and including 52KV
3	IEC-60060-2 2010	High voltage test techniques
4	IEC-60071	Insulation co-ordination
5	IEC-60270:2000	Partial discharge measurements.

6	IEC60529:2001	Degree of protection provided for enclosures (IPcode).
7	IS-996	Single-phase a.c. industrial motors for general Purpose
8	IS-5578:1984, IS-11353:1985	Marking and arrangements for switchgear busbar, Main connections and auxiliary wirings
9	IS-16227:2016/IEC 61869-2	Instrument Transformers - Current Transformers
10	IS-16227 3&5/IEC 61869-3	Instrument Transformers - Potential Transformers
11	IS-2629	Recommended practice for hot dip galvanised iron& steel
12	IEC 60255	Numerical relays
13	IEC 60898	MCB
14	IS 1248/2003	Measuring instruments and their accessories
15	IEC 60282/IS:9385/1979	High Voltage HRC Fuses
16	Indian Electricity Act 2003 and latest amendments	
17	IEEE 693	Recommended practice for Seismic design of substation.
18	IEC 62271-300	Guide for Seismic qualification of High voltage alternating current circuit breakers.
19	IS 6005	Code of practice for phosphating of Iron and Steel
20	IS 5	Colors for ready mixed paints and enamels
21	IEC 62271-304	Additional requirements for enclosed Switchgear and Control Gear from 1KV to 52 KV to be used in severe climatic condition.
22	IS 13947 Part 5:2004	Control switches for voltages upto and including 1000 Volt AC and 1200 Volt DC (switching devices for control and auxiliary circuits including contactor relays)

Equipment meeting with the requirements of any other authoritative standards, which ensures equal or better quality than the standards mentioned above shall also be acceptable. If the equipments, offered by the Bidder conform to other standards, salient points of difference between the standards adopted and the specific standards shall be clearly brought out in relevant schedule. Two copies of such standards with authentic English Translations shall be furnished along with the offer.

3.0 PANEL CONSTRUCTION

3.1	Enclosure Type	Free standing, Indoor, Fully compartmentalised, Metal clad and Vermin proof
3.2	Enclosure degree of Protection	IP 4 X for HV compartment IP 5 X for LV compartment
3.3	Enclosure material	Pre-Galvanized CRCA steel / Aluminium Zinc sheet.
3.3.1	Thickness	Load bearing members 2.5 mm thick Doors and covers 2.0 mm thick

3.3.2	Gland plate	3.0 mm MS for multicore and 5. 0 mm Aluminium for single core cables. All gland plates should be detachable type with gasket
3.4	Height of the panel	Maximum 2000mm (preferred). Operating height maximum 1600mm (Mandatory).
	Note: Offered equipment with height/operating height more than the specified height, necessary Platform/Portable ladder shall be provided without disturbing VCB rack out arrangement for easy access of the panel.	
3.5	Top cover	Adequate stiffness should be provided so that minimum 2 persons could walk on top during erection and inspection. 4 Nos. lifting hooks are required.
3.6	Extensibility	On either side
3.7	Compartments	Separate for Bus bar, Circuit Breaker, cable, PT and LV instruments & relays
3.8	Transparent inspection window	For Bus bar chamber is required to view the busbar condition. The Transparent windows shall be made of clear and unbreakable material to withstand the pressure during bus fault condition.
3.9	Breaker compartment door	Separate, with lockable handle. Door of one panel should not cause hindrance for opening of adjacent panel.
3.10	Inter compartmental connections	1) Breaker to bus bar compartment Through seal-off bushings. 2) Breaker to cable compartment Through seal-off bushings
3.11	Pressure relief devices	To be provided for each HV compartment
3.12	Bus support insulator	Non-hygroscopic, track-resistant, high strength, Epoxy insulators (Calculation for validating dynamic force withstand capability to be submitted during detailed engineering)
3.13	Fixing arrangement	Doors - Concealed hinged, door greater than 500mm shall have minimum three sets of hinges, Covers - SS/Zinc-Cadmium plated bolts, Gasket - Neoprene/EPDM. Nuts & Bolts used for bus bar connections shall be of non magnetic stainless steel. Only Belleville type washers shall be provided for each nut bolt.
3.14	Cable termination height	850 mm
	Note: In case of height of cable termination less than the specified height, Cable pan to be provided to cover the end termination.	
3.15	Cable box	There shall be suitable MS channel with adequate holes for cable clamping arrangement in all Feeders and Transformer panels. 1) Transformer LV panel shall have provision to connect 2 runs of 33 kV 1 X 630 sq. mm. XLPE aluminium cable per phase 2) Transformer HV panel & Incomer/outgoing feeder panel shall have provision to connect 1 run of 33 kV 1 X 630 sq. mm. XLPE aluminium cable per phase. The required termination kits shall be supplied along

		with the panel free of cost.
3.16	Panel Base Frame	Steel Base frame as per manufacturer's standard.
	Note: The offered panel having inbuilt MS channel base frame are accepted and shall be as per type tested design. Grouting arrangements shall be provided. All hardware required for erection shall be supplied.	
3.17	Handle	Removable bolted covers with handle for cable chamber and busbar chamber. Panel no./identification to be provided on cable box cover also Operating handle, circuit breaker draw out handles are to be supplied at the rate of one set each for two panels supplied. Additional shall be supplied as and when required by TANTRANSOCO.
3.18	Technical particulars	As per Annexure –A of Technical specification.

4.0 CIRCUIT BREAKER

4.1	Type	Floor mounted truck type only. Cassette trolley mounted truck is not acceptable.
4.2	Mounting	Horizontally drawn out truck with locking facility in service position.
4.3	Switching duty	As mentioned in the Type Test
4.4	Interrupting medium	Vacuum
4.5	Breaker operation	Three separate identical single pole units operated through the common shaft
4.6	Operating Mechanism	Re-strike free, Trip free, with electrical anti-pumping feature.
4.6.1	Type	Motor wound, spring charged, stored energy type with manual charging facility
4.6.2	Rated operating duty cycle	O-0.3s-CO-3min-CO. Duty Cycle O-0.3s-CO-15s-CO is preferable.
4.6.3	Operation on supply failure	One O-C-O operation possible after failure of power supply to the spring charging motor
4.7	Breaker indications & push buttons	
4.7.1	ON/ OFF Emergency trip & on push button shall be operated when front door is closed	a. Manual / mechanical. b. Emergency Off push button with a protective flap. c. Mechanical ON shall have locking facility to avoid accidental closing
4.7.2	Mechanical ON – OFF indication	On breaker front
4.7.3	Operation counter	On breaker front
4.7.4	Test-service position indicator	Mechanical Test/Service Position indication shall be provided in the breaker front in addition to Electrical indication through LED lamps at LT Chamber.
4.7.5	Mechanism charge /discharge indicator	On breaker front
4.8	Breaker positions	Service and Test
4.9	Inter changeability	Should be possible
4.10	Breaker Control	On panel front only

4.11	Handle	Breaker shall be provided with handles for easy handling, rack in–out operation and manual spring charging as applicable
4.12	Technical particulars	As per Annexure –A of Technical specification

5.0 FUNCTIONAL REQUIREMENTS

5.1	Interlocks	
5.1.1	The movement of the switchgear truck should be defeated	when Breaker is in service position and is in ON position.
5.1.2	Racking in of the Switchgear truck should be defeated	If the control plug is not plugged in on to the VCB truck and VCB is ON condition. Also breaker should get tripped if the control plug is removed when the breaker is ON.
5.1.3	The closing of the breaker either electrically or mechanically should be defeated	If the breaker is not locked in the service position fully. A by- pass for conducting pre commissioning tests shall be provided
5.1.4	Closing pulse can be given to the breaker in service position.	Only after spring charging is completed through spring charge limit switch and service position limit switch
5.1.5	Movement of switchgear truck to be prevented	Mechanical Only, when the circuit breaker is in the ON position
5.1.6	The closing of the breaker to be prevented	when the breaker is in service position and the control cable plug is not inserted in the truck.
5.1.7	Movement of the switchgear truck from service to test position	shall be possible only when the breaker is in OFF position.
5.1.8	Opening of front door of the switchgear compartment	shall be possible only when the breaker is tripped and brought to test position.
5.1.9	Rear cable chamber cover shall not be opened	unless and otherwise the breaker is OFF and in test position. (Rear cover shall be with mesh protection)
5.1.10	Closing of the Breaker to be prevented	when the trip circuit failure signal has been activated. Both mechanical and electrical interlock shall be provided to prevent closing of circuit breaker in the event of trip circuit failure
5.1.11	The movement of the switchgear truck should be defeated	When the rear covers are not closed.

5.2	Potential transformer Connection	The primary of the potential transformer should be connected such a way that on energising the incomer Power transformer panel, the incoming side voltage shall be read by the voltmeter. Similarly in case of Feeder, panel the incoming side voltage shall be read by the voltmeter once the source cable is energised without switching on the panel.
5.3	Plug and Socket	Interlock should be provided for proper insertion.
5.4	Line indication	to be provided in both Transformer & feeder panels by using Capacitor Cable divider.
5.5	Heater circuit healthy indication (one lamp with 3 push buttons)	To be provided in Transformer, Bus coupler & feeder panel.
5.6	DC surge protection device	To be provided in Transformer, Bus coupler & feeder panel. MOV type devices meant to protect one time surge are not acceptable.
5.7	Power Devices like drive Motors	415V, 3 Phase 4 Wire 50Hz, AC of rating 1 KW and above neutral grounded.
Detailed drawings/write ups on the operation of the above interlocks shall be provided along with the Technical offer.		
5.8	Safety Devices	
5.8.1	Exposure to live parts	In case the breaker panel door is required to be opened during a contingency, the personnel should not be exposed to any live part. Suitable shrouds/ barriers/insulating sleeves should be provided.
5.9	Operation of breaker	In either service or test position
5.9.1	Tripping/Closing from local	Only when local/remote selector switch is in local position
5.9.2	Closing from remote	Only when local/remote selector switch is in remote Position
5.9.3	Tripping from local/remote	Irrespective of position of local/remote switch
5.9.4	Tripping from protective relays	Irrespective of position of local/remote switch
5.9.5	Testing of breaker	In test or isolated position keeping control plug connected
5.10	Safety shutters	Automatic safety shutter to fully cover contacts when breaker is withdrawn to test.
5.10.1	Warning label on shutters	Clearly visible label "Isolate elsewhere before earthing" to be provided
5.11	Breaker electrical operation features	
5.11.1	Trip circuit supervision	To be given for breaker close & open condition
5.11.2	Trip circuit supervision relay contact	For indication, alarm, SCADA & to inhibit closing of breaker
5.11.3	Emergency trip push button contact	Wired directly to trip coil. Second trip coil wired to Master trip relay and also wired to inhibit closing of breaker
5.11.4	Master trip relay contact	Wired to inhibit closing of breaker
5.12	DC control supply in all panels	Fed by two DC incoming sources

5.13	PT supply in all panels	Fed normally by incomer line PT with automatic changeover facility in Bus coupler panel when one incomer line PT fails.
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6.0 SURGE SUPPRESSOR

6.1	Provision	To be provided in all panels except bus coupler
6.2	Type	Gapless, metal oxide type Polymer type surge arrester shall be provided in the cable chamber
6.3	Technical particulars	As per Annexure –A of Technical specification

7.0 CURRENT TRANSFORMER

7.1	Type	Window/ring type, indoor resin cast, three core for transformer LV and HV and bus coupler, two core for incomer and feeder.
7.2	Rating and technical particulars	As per Annexure – A of Technical specification. Insulation Class E or above

8.0 POTENTIAL TRANSFORMER

8.1	Type	Cast resin type on incomer line side. Line side PT required for transformer LV panels in case of 110/33 KV SS and incoming feeder panels in case of 33/11 KV SS
8.2	Rating and technical particulars	As per Annexure - A of Technical specification. Insulation Class E or above
8.3	Mounting	It shall be floor mounted on a with drawable carriage. Mounting of PT on the breaker truck is not acceptable.
	Note: PT as part of VCB truck is accepted if it is as per the type tested design.	
8.4	Neutral	The HV neutral connection to earth shall be easily accessible for disconnection during HV test.

9.0 COMPATABILITY WITH SCADA SYSTEMS

The following features should be incorporated in the Indoor Vacuum Circuit Breaker panels so as to be compatible with the SCADA system.

SI No	Feature	Provision to be made available	Terminal Mark(X1-SCADA) Terminal Block Number	Type of contact
9.1	Wiring (All panels) for routing status signals to SCADA	1 – TC Unhealthy 2 – CB Auto trip CB Auto trip 3 – CB Open – CB Open 4 – CB Close – CB Close 5 – CB in service 6 – CB in Test 7 – Spring Charged 8 – L/R switch (local) 9 - L/R switch (Remote) 9 – AC fail 10 – Adjacent Panel DC Fail/DC MCB Trip 11 – Adjacent Panel Protection Relay fail 12 – PT MCB trip (metering for incomer panel only) Sequence should be followed strictly as mentioned above. Change in sequence will not be acceptable.	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	NO NO NC NO NC NO NC NO NO NO NO NO NO NO NO
9.2	Current	Additional disconnecting TB to be provided in the metering circuit for connecting external MFT.	The external MFT/Meter etc should be able to be connected without CT circuit getting open-circuit.	
9.3	Transfer of Data from the Trivector Meter	Static Trivector Meter capable of storing load survey for 35 days and RS 485 Port with MODBUS confirming IEC Protocol.	The Meter communication standard and MODBUS address register mapping will be given by TANTRANSCO.	

9.4	In Transformer HV Panel	In addition to the above, the following trip and alarm commands should be wired from Auxiliary relays(DC) spare contacts (contactors will not be accepted) a. Buchholz trip b. OSR trip c. PRV main tank trip d. Differential Trip e. WTI Trip f. OTI Trip PRV OLTC trip g. Buchholz Alarm h. Low oil level alarm i. OTI Alarm j. WTI Alarm.	All Contacts shall be NO	Differential Trip provision is to be given for wiring differential trip command from auxiliary relay (DC) spare contact
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NOTE: There should be terminal blocks specifically marked for SCADA systems. Separate terminal block for connecting the SCADA wiring in the control panel shall be provided in one single channel for all panels.

10.0 EQUIPMENT EARTHING

10.1	Material of earthing bus	25mm x 6mm tinned copper flat for earth bus and 25 mm X 3 mm tinned copper flat for individual earthing. Provision shall be made on end panels for connecting the earth bus to the earth grid.
10.2	Earth bus joints	All bolted joints in the bus should be made by connection of two bolts.
10.3	Enclosure & non –current carrying part of the switchboard /components	Effectively bonded to the earth bus.
10.4	Hinged doors	Earthed through flexible copper braid
10.5	Circuit breaker frame /carriage	Earthed before the main circuit breaker contacts / control circuit contacts are plugged in the associated stationary contacts
10.6	Metallic cases of relays, instruments and other LT panel mounted equipment	Connected to the earth bus by independent copper wires of size not less than 4 sq. mm with green colour insulation. For this purpose LT compartment should have a clear designated earth bus to which earth connections from all components are to be connected.
10.7	CT and PT neutral	Earthed at one place at the TB through links.

11.0 METERS

11.0	Mounting	Flush mounted
11.1	Ammeter	Analog
11.1.1	Size	Size 114 X 114 mm

11.1.2	To be provided	All panels
11.1.3	Ammeter selector switch	To be provided in all panels with 6 position.
11.1.4	Accuracy	Class 1.0
11.2	Voltmeter	Analog
11.2.1	Size	Size 114 X 114 mm
11.2.2	To be provided	All Incomer panels with 7 position (LV in case of 110/33 kV SS & Incoming feeder in case of 33/11 kVSS)
11.2.3	Accuracy	Class 1.0
11.3	Static Trivector Meter	Compatibility with HMI SCADA with MODBUS protocol and TANTRANSCO HT metering, DLMS with ABT features, 0.2S accuracy Type A (MFT not in scope of supplier)
11.3.1	To be provided	All panels except bus coupler panel
11.4	Technical particulars	As per Annexure – A of Technical specification

12.0 INDICATION, ALARMS & ANNUNCIATION

12.1	Indications	Flush mounted, High intensity, clustered LED type. Lamps must be replaced from the front end instead of the rear end.
12.1.1	Breaker ON	Red
12.1.2	Breaker Off	Green
12.1.3	Spring Charged	Blue
12.1.4	DC control supply fail	Amber
12.1.5	AC control supply fail	Amber (Preferably some other colour)
12.1.6	Auto trip	Amber (Preferably some other colour)
12.1.7	Test Position	White
12.1.8	Service Position	White (Preferably some other colour)
12.1.9	Heater circuit healthy	Yellow (Indication with integrated push button for checking)
12.1.10	Trip circuit healthy	White
12.1.11	PT supply as applicable	R, Y B
12.2	Annunciator	
12.2.1	Type	Static type along with alarm. Annunciations shall be repetitive type and shall be capable of registering the fleeting signal. Fascia test facility should also be provided.
12.2.2	To be provided for	auxiliary relays, flasher, hooter / bell for indicating tripping of the feeders, DC fail and discontinuity of the trip circuits of all panels
12.2.3	Wiring	All the panels shall have the inter connection for accepting / resetting the alarms with push button arrangements from the respective panels. Separate DC wiring shall be provided in the annunciator panel. No looping is permitted.

12.2.4	Mounting	Flush mounted
12.2.5	Fascia	24 window to be provided in transformer panel and 12 window to be provided in bus coupler panel
12.2.6	Signals to be provided on Fascia	1) CB Auto trip for Feeder panel 1 to 4 - 4 window 2) Auto trip for Transformer panel – 1 window 3) CB Auto trip for Bus coupler panel 1 window 4) Main DC Fail (from 80C Relay in HV Panel)-1 window 5) Annunciation for TCS for Feeder panel 1 to 4 - 4 window 6) Annunciation for TCS for HV panel - 1 window 7) Annunciation for TCS for Bus coupler panel -1 window 8) DC MCB Trip for Feeder, HV and Bus coupler Panel-6 window . 9) Annunciation for O/L & E/L Relay fail for Feeder panel, HV Panel and Bus coupler Panel – 6 window For Transformer protection i) Buchholz Alarm ii) Winding temp Alarm iii) OIL Temp Alarm iv) Low Oil Level Alarm v) Buchholz Trip vi) Winding Temp Trip vii) PRV Main Tank Trip viii) PRV OLTC Trip ix) OSR Trip
12.2.7	Push Buttons	For test, accept and reset
12.2.8	Potential Free Contacts	To be provided for event logger
12.3	Alarm scheme with isolation switch	For all signals wired to annunciator.

Sequence of operation of the annunciator shall be as follows-

S No.	Alarm Condition	Fault Contact	Visual Annunciation	Audible Annunciation
a.	Normal	Open	Off	Off
b.	Abnormal	Close	Flashing	On
c.	Accept	Close	Steady on	Off
d.	Return to normal	Open	Steady on	Off
e.	Reset	Open	Off	Off

f.	Reset before return to normal	Close	Flashing	On
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13.0 SELECTOR SWITCHES & PUSH BUTTONS

13.1	Selector switches	Flush mounted on LV compartment door, withshrouded terminals
13.1.1	TNC switch with pistol grip	Lockable, spring return to normal position
13.1.2	Local/SCADA selector switch	2 pole
13.1.3	Rotary ON/OFF switches	For heater, illumination circuit, Ammeter & Voltmeter
13.1.4	Rating	16 A
13.2	Push Button	Flush mounted on LV compartment door, withshrouded terminals
13.2.1	Emergency trip push button	Red colour with stay put
13.2.2	Accept push buttons	Trip alarm / DC fail alarm
13.2.3	Reset push buttons	Trip alarm / DC fail alarm
13.2.4	Rating	10 A

14.0 INTERNAL WIRING

14.0	Internal wiring	1100 volt Grade single core multistranded flexiblecopper conductor wires with P.V.C insulation and shall be flame retardant low smoke type.
14.1	Size	4.0 Sq.mm. for entire CT circuits, 2.5 Sq.mm. for PT entire AC Power & DC Control circuits and others 1.5 Sq.mm
14.2	Colour code	CT & PT circuits - Red, Yellow, Blue for phase and Black for neutral. DC circuits - Grey for both positive and negative. 250V AC circuits - Black for both phase & neutral Earthing - Green
14.3	Ferrules	At both ends of wire with number as per approved drawing.
14.4	Ferrule type	Interlocked type. The wire number shown on the wiring shall be in accordance with the IS.5578/11353. All wires directly connected to trip circuits of breaker or devices shall be distinguished by addition of a red colour unlettered ferrule
14.5	Lugs	Solder less crimping type tinned copper lugs, pre-insulated, ring type, fork type and pin type as applicable. CT circuits should use ring type lugs only.

14.6	Spare contacts	At least 20% of total terminals. Wiring shall be done for all the contacts available in the relay and other equipment and brought out to the terminal blocks for spare contacts.
14.7	Wiring enclosure	Plastic channels, The cables shall be uniformly bunched and tied by means of PVC belts and carried in a PVC carrying trough. Inter panel wiring through PVC sleeves grommets. Duct covers shall be provided with welded nuts.
14.8	Interpanel wiring	Wires with ferrule to be terminated in the adjacent shipping section should be supplied with one end terminated and the other end bunched and coiled.
14.9	Auxiliary supply	Auxiliary bus wiring for AC and DC supplies, voltage transformer circuits, annunciation circuits and other common services shall be provided on the same set of terminals in all the panels with proper segregation.

15.0 TERMINAL BLOCKS

15.1	Rating and Type	shall be of clip-on design made out of non-trackable insulating material of 1100 V grade.
15.2	Suitability	For termination of minimum 6sqmm flexible copper conductor.
15.3	Marking and covers	White fibre markings strip with clear plastic, slip-on /clip-on terminal covers to be provided.
15.4	Disconnecting Facility	To be provided in CT and PT terminals
15.5	Shorting & Earthing Facility	To be provided in CT terminals
15.6	Spare Terminals	20% in each TB row
15.7	TB shrouds & separators	Moulded non- inflammable plastic material. Separate TB shall be used for AC control, DC control, CT & PT circuits. All spare contacts shall be wired to a separate TB. All TBs shall be labelled according to their purpose.
15.8	Clearance between 2 sets of TB	100 mm min
15.9	Clearance with cable gland plate	250 mm min
15.10	Clearance between AC / DC set of TB	100 mm min
15.11	Test terminal blocks	Screw driver operated stud type for metering circuit

16.0 RELAYS

16.1	Protection Relays – General Features
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16.1.1	Technology and Functionality	Numerical with 3 OL & 1 EL with instantaneous tripping feature. Relays shall be able to reset remotely. There shall not be any loss of data due to self/remote reset. Full draw out type only
16.1.2	Mounting	Flush Mounting, IP5X
16.1.3	Architecture	Hardware and software architecture shall be modular and disconnectable to adapt the protection and control unit to the required level of complexity as per the application.
16.1.5	SCADA Interface port	The relay should have MODBUS RTU protocol communication port (RS 485) for communication with existing SCADA and RJ 45 port compatible for IEC 61850 Protocol for future.
16.1.6	PC Interface port	Rear port (preferably serial) for configuration/data download using PC including licensed software and communication cord required for programming of offered protection relays should be included. 1. Front communication port USB/rj45 for connecting Laptop.
16.1.7	User Interface	An alphanumeric key pad and graphical LCD display with backlight indicating measurement values and operating messages. It should be possible to access and change all settings and parameters without the use of PC.
16.1.8	Event and Fault records	Relay shall have the facility of recording of various parameters during event/fault with option to set the duration of record through settable pre fault and post fault time. Relay shall store records for last 100 events and 10 faults with magnitude of fault current and phase indication with time stamping (minimum). It should be possible to download records locally to PC or to remote SCADA.
16.1.9	Self diagnosis	Relay shall be able to detect internal failures. A watchdog relay with changeover contact shall provide information about the failure.
16.1.10	Time synchronization	All relays shall be capable of being synchronized with the system clock using SCADA interface and PC. Time synchronisation with SNTP also acceptable
16.1.11	Operation Indicators	LEDs with push button for resetting.
16.1.12	Test Facility	All relays shall be installed with Test block of LLGO type with plug to facilitate relay calibrating/ testing/ replacing without any interruption of power supply.
16.2	Protection Relays	
16.2.1	3-phase Over current and Earth fault protection with IDMT, Definite time and instantaneous	To be provided in Transformer, Bus coupler, feeders and incomer panel.

	Characteristics.	
16.2.2	PT sync check relay (Parallel operation is envisaged)	To be provided in Bus coupler panel, with 2 PT supervision (fuse failure monitoring) for LinePT. May be provided as integral feature of relay
16.3	Auxiliary Relays – General Features	
16.3.1	Relays for auxiliary, supervision, trip and timer Relays	Electromechanical type only.
16.3.2	Reset mechanism for auxiliary relays	Self reset contacts only for Master trip Relay(86). Electrical reset from remote and hand from local
16.3.3	Operation indicators	With hand-reset operation indicators (flags) or LEDs with pushbuttons for resetting.
16.4	Auxiliary relays – Requirement	
16.4.1	Anti pumping (94), Master Trip Relay(86) and trip circuit supervision (95) relays	Separate relays for Antipumping (94), Master trip relay(86) and the Trip Circuit Supervision (95) shall be provided for each breaker. Separate one No single element Master relay for feeder panels and bus coupler panel and two Nos single element Master relay for Transformer panels shall be provided. Trip circuit Supervision relay shall be provided in all panels and it shall have features to supervise trip circuit for pre close and post close of circuit breaker.
16.4.2	PT selection relays	To be provided for selection between PTs
16.4.3	Auxiliary Relays, contact multiplication relays etc.	To effect interlocks and to exchange signals of status & control
16.4.4	Transformer trouble relays (For 33kV Transformer panel only)	Auxiliary relays with indicating flags (contactors will not be accepted) should be provided for the following trip and alarm commands – a. Buchholz trip b. OSR trip c. PRV trip d. PRV OLTC trip e. WTI Trip f. Buchholz Alarm
		g. Low oil level alarm h. OTI Alarm i. WTI Alarm.
16.5	General Requirements for all relays/contactors	Auxiliary supply will 110/30 V DC based on requirement. All relays/contactors shall be suitable for continuous operation at 15% overvoltage.

16.6	Relay Characteristics	As per Annexure – A of Technical specification
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17.0 SPACE HEATERS

17.1	Type	3 Nos. 80 Watts, PTC (Positive Temperature coefficient) heaters with Hygrostat control and with switch for isolation.
17.2	Location	One in cable compartment. Should be easily accessible after cable termination. Another in the breaker chamber shall be accessible with breaker racked-in and the third one in the Bus bar chamber
17.3	Heater circuit healthy indication	One lamp with 3 push buttons to be provided in Transformer (Both LV & HV), Bus coupler and feeder panels.

18.0 SOCKETS, SWITCHES & ILLUMINATION LAMPS

18.1	Illumination lamp with switch	3 no 14 W LEDs to be provided in the Bus bar, L.V. chamber and cable compartments.
18.2	Universal type (5/15 A) Socket with Switch	In all Panels.

19.0 NAMEPLATES AND MARKING

19.1	Nameplates	To be provided as per the following description
19.1.1	Equipment Nameplates	<p>a. All equipment mounted on front side as well as equipment mounted inside the panels shall be provided with individual name plates with equipment designation engraved.</p> <p>b. All front mounted equipment shall be also provided at the rear with individual name plates engraved with tag numbers corresponding to the one shown in the panel internal wiring to facilitate easy tracing of the wiring</p>
19.1.2	Feeder Nameplates	<p>a. Large and bold name plate carrying the feeder identification/numbers shall be provided on the top of each panel on front as well as rear side. On rear side, nameplate should be provided on frame.</p> <p>b. Rear bottom of each panel shall have a nameplate clearly indicating the following: Customer Name – TANTRANSCO; PO No. & date; Drawing Reference No. etc.</p>

19.1.3	Rating Plate	a) Name of manufacturer b) Type, design and serial number c) Rated voltage and current d) Rated frequency e) Rated symmetrical breaking capacity f) Rated making capacity g) Rated short time current and its duration h) Purchaser Order number and date i) Month and Year of supply j) Rated lighting impulse withstand voltage k) D.C. component of current. l) Guarantee period.
19.1.4	Material	Non-rusting metal or 3 ply lamicaid/trafolyte. Nameplates shall be black with white engraving lettering. Stickers are not allowed.
19.1.5	Fixing	All nameplates/rating plates shall be riveted to the panels at all four corners. Bolting/screwing is not acceptable.
19.2	Markings	Each switch shall bear clear inscription identifying its function. Similar inscription shall also be provided on each device whose function is not otherwise identified. If any switch or device does not bear this inscription separate nameplate giving its function shall be provided for it. Switch shall also have clear inscription for each position indicating e.g. Trip-Neutral close, ON-OFF etc.

20.0 SURFACE TREATMENT & PAINTING

20.1	Surface Treatment	Sand blasting or by seven tank process.
20.2	Paint type	Powder coated. Pure polyester base grade-A structure finish.
20.3	Paint shade	RAL 7032 for external & internal surface
20.4	Paint thickness	Minimum 50 microns

21.0 APPROVED MAKES OF COMPONENTS

21.1	Numerical Relays	Areva/Siemens/GE/ABB/Easun/CGL/Ashida/C&S. Numerical relays used in complete switchboard should be of same make. Use of two different makes of relays in a switchboard is not acceptable. Relay shall be got approved by TANTRANSCO during drawing approval
21.2	Electromechanical Relays	Alstom/Schneider/Siemens/ABB/ER
21.3	Relays	ABB/Jyoti
21.4	Contactors	ABB/Siemens/Telemecanique/L&T/ C&S
21.5	MCBs	Siemens/Schneider/Legrand/ABB/L&T/ C&S
21.6	Control switches	Switron/Kaycee/Recom/Alstom

21.7	Test terminal blocks	IMP/Schneider/Alstom
21.8	Terminal blocks	Elmex/Connectwell/Allen Bradely/Imp
21.9	Indicating lamps LED	Kaycee/Alstom/Vaishno/Technik/C&S(R AAScontrols)
21.10	Surge suppressors	Oblum/Tyco
21.11	Meters	AE/Meco/IMP/Rishabh
21.12	Termination Kits	Raychem/Denson/3M-M-Seal.
21.13	Panel wiring	Finolex/Pcko/Phoenix/Havells
21.14	CT/PT	Kappa/Crompton Greaves/Jyoti /Siemens/Concord/Vishal Emmess /ECS/ Pragati
21.15	Trivector meter	Secure/L&T/Lyandis Gear
21.16	Vacuum interrupter	Westing House/Crompton Greaves/Siemens/ BEL/ABB
21.17	Annunciator	Alan/JVS/Pradeep/Proton/Minilec
21.18	LED	Philips/CGL/Bajaj
21.19	Termination Kits	Raychem/Denson/3M-M-Seal/Compaq
Note : Other than recommended make proposed by the tenderers shall be accepted onapproval from the TANTRANSCO testing authorities.		

22.0 INSPECTION AND TESTING

22.1	Type Tests	Type tests as per latest IEC must have been performed and the certified copies of test reportshall be enclosed along with technical bid
	Mandatory Type tests	As per clause 9 of enclosed Annexure A:Technical specification.
22.1.1	Type test report validity period	Ten years as on the date of bid opening.
22.1.2	Pressure relief device operation	Test certificate for panel to be submitted
22.2	Acceptance & Routine tests	All acceptance and routine tests as stipulated inthe latest IEC.
	In addition to these tests, following tests have to be carried out as acceptance tests	
22.2.1	Primary injection test	To be carried out on panels selected for testing
22.2.2	Temperature rise test for breakerand Busbar	1250 Amps for breaker and 2000 Amps for Busbar per panel for every inspection withoutany commercial implication to TANTRANSCO.In-house testing is acceptable.
22.2.3	Paint Thickness/ Peel off	To be carried out on panels selected for testing

22.3	Inspection	Routine/acceptance testing tests inspection will be witnessed by the officers (two) nominated by TANTRANSCO.
	<p>A) Acceptance Tests</p> <p>The following tests constitute acceptance tests. However tests as per the approved QA plan shall be carried out.</p> <ol style="list-style-type: none"> 1. Operational (electrical and mechanical tests on all components) 2. Dielectric test in accordance with IEC 60694. 3. Insulation resistance test applying a 5kV Megger, between each phase against earth with two remaining phases connected to earth (ensure that VT is isolated during the Megger and tested separately). The insulation test shall be carried out with all manually operated and latched type 4. switching devices in the service and closed position and all main fuses installed. 5. Protection operation by primary injection of current and voltage as agreed. 6. Verification of availability and correct operation of all protection and control functions of all protection relays. 7. Partial discharge test <p>B) Routine tests</p> <p>All the routine shall be carried out by the manufacture as per relevant IEC standards. The following routine tests may be carried out in the factory. Necessary certificates pertaining to this shall be submitted before dispatch of the material. The Routine tests should be conducted on end product.</p> <ol style="list-style-type: none"> 1. Power frequency withstand voltage 2. Auxiliary and control circuits voltage test 3. Principal circuit ohm-metric test 4. Mechanical operation test 5. Electrical auxiliary device test 6. Wiring check 7. Sealing rest <p>Inspection for witnessing of tests:-</p> <p>The purchaser will witness the tests as identified in the approved QA plan.</p> <p>Acceptance tests inspection shall be carried out on the complete assembled switchgear will be witnessed by not less than 2 (Two) persons nominated by TANTRANSCO.</p> <p>Inspection and acceptance of any equipment shall not relieve the supplier of his obligation of furnishing equipment in accordance with the specification and shall not prevent subsequent rejection if the equipment is found to be defective. The supplier shall keep the purchaser informed in advance, about the manufacturing program so that arrangement can be</p>	

	made for inspection. The purchaser reserves the right to insist for witnessing the acceptance/routine testing of the bought out items. No material shall be despatched from its point of manufacture unless the material has been satisfactorily inspected and tested /unless the same is waived by the purchaser in writing. 8.The details step by step erection procedure with foundation drawings and method statement shall be submitted to TANTRANSCO.	
22.4	Test reports before dispatch for approval	Six (6) copies of acceptance and routine test reports

23.0 DRAWINGS & DATA SUBMISSION

23.1	Submissions along with the bid	
23.1.1	Duly filled GTP and copy of specification	
23.1.2	GA drawing and Cross sectional drawings	
23.1.3	Panel wise Bill of Material	
23.1.4	Catalogues and Manuals for all major equipments	
23.1.5	Type test report for type, size and rating of equipment offered.	
23.1.6	Deviations from this specification	To be provided in writing.
23.1.7	Reference List of customers	For last five years with units of similar design and rating
23.1.8	Recommended spares and consumables	If any spares suggested (in addition to spares list in clause 33 in Technical specification) for five years of operation shall be mentioned
23.1.9	Manufacturer's quality assurance plan	To be provided as per clause 10 of enclosed Annexure A: Technical specification
23.2	Submissions after award of Tender	
23.2.1	Duly filled GTP	1 copy + soft copy
23.2.2	Panel wise Bill of Material	1 copy + soft copy
23.2.3	GA and Cross sectional drawings	1 copy + soft copy

23.2.4	Single line diagrams	1 copy + soft copy
23.2.5	Schematic drawings	1 copy + soft copy
23.2.6	Calculations for sizing of various equipment	1 copy + soft copy
23.2.7	Catalogues and Manuals for all equipments	1 copy + soft copy
23.2.8	Foundation Plan	1 copy + soft copy
23.2.9	Calculations for sizing of various components	1 copy + soft copy
23.2.10	Type test report for type, size and rating of equipment offered.	1 copy + soft copy
23.1.11	Manufacturer's quality assurance plan	1 copy + soft copy
23.2.12	Deviations from this specification	Approved in writing before award of Tender.
23.3	Submissions prior to dispatch	
23.3.1	Inspection and test reports/ compliance report by manufacturer	1 copy + 1 soft copy
23.3.2	Test certificates for all bought out items	1 copy + 1 soft copy
23.3.3	GTP and As Built drawings consisting of GA, Cross sectional, SLD and schematic drawings	6 copies + 1 soft copy Panels supplied without as built drawing will be treated as short supply.
23.3.4	Catalogues and Manuals for all equipments / relays	3 copies + 1 soft copy.
23.3.5	Field quality plan / Installation, erection and commissioning manual for switchgear	3 copies + 1 soft copy.
23.4	Drawing and document sizes	Standard size paper A3 and A4 respectively.

24.0 PACKING

24.1	Packing Protection	Against corrosion, dampness, heavy rains, breakage and vibration. During transportation/transit and storage, panels may be subjected to outdoor conditions. Hence, packing of each panel shall be weatherproof.
24.2	Packing for accessories and Spares	Robust wooden non returnable packing case with all the above protection & identification Label
24.3	Packing Identification Label to be provided on each packing case with the following details	

24.3.1	Individual serial number
24.3.2	Purchaser's name
24.3.3	PO number (along with item code, if any) & date
24.3.4	Equipment Tag no. (if any)
24.3.5	Destination
24.3.6	Project Details
24.3.7	Manufacturer / Supplier's name
24.3.8	Address of Manufacturer / Supplier / it's agent
24.3.9	Description and Quantity
24.3.10	Country of origin
24.3.11	Month & year of Manufacturing
24.3.12	Case measurements
24.3.13	Gross and net weights in kilograms
24.3.14	All necessary slinging and stacking instructions

25.0 SHIPPING

25.0	Shipping	<p>The bidder shall ascertain at an early date and definitely before the commencement of manufacture, any transport limitations such as weights, dimensions, road culverts, Overhead lines, free access etc. from the Manufacturing plant to the project site. Bidder shall furnish the confirmation that the proposed Packages can be safely transported, as normal or oversize packages, up to the site. Any modifications required in the infrastructure and cost thereof in this connection shall be brought to the notice of the Purchaser.</p> <p>The seller shall be responsible for all transit damage due to improper packing.</p>
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26.0 HANDLING AND STORAGE

26.0	Handling and Storage	Manufacturer instruction shall be followed
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27.0 QUALITY ASSURANCE

27.1	Vendor quality plan	To be submitted for purchaser approval
27.2	Inspection points	To be mutually identified & agreed in quality plan

28.0 PROGRESS REPORTING

28.1	Outline Document	To be submitted for purchaser approval for outline of production, inspection, testing, packing, dispatch, documentation programme
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29.0 DEVIATION

29.0	Deviation	Deviations from this Specification shall be stated in writing with the tender by reference to the Specification clause/GTP/Drawing and a description of the alternative offer. In absence of such a statement, it will be assumed that the bidder complies fully with this specification.
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30.0 ACCESSORIES & TOOLS

30.1	Type and Quantity	Bidder to indicate
30.2	Breaker operating rod, dooropening key, interlock key, spring charge rod etc., shall be given.	For every 2 Nos. of breakers. End covers shall be provided as per the request of TANTRANSCO to suit site conditions
30.3	Special tools & tackles required for erection, testing, commissioning and maintenance of the switchboard	Shall be indicated. One set per 10 panels shall be given at free of cost along with panels

31.0 Mandatory spare parts to be supplied as follows:

Vacuum interrupter --- 5 Nos.

Feeder CT -----900-600/1-1A – 5 Nos.

Transformer LV CT ---1200-900/1-1-1A – 5 Nos

Transformer HV CT ---600-300/1-1-1A – 5 Nos

Trip Coil----- 10 Nos.

Close Coil----- 10 Nos

32.0 COMMISSIONING SUPPORT

Erection and commissioning will be done by TANTRANSCO inclusive of all testing. Vendors shall extend all necessary assistance during Erection testing and commissioning.

**ANNEXURE – A - TECHNICAL PARTICULARS
(DATA BY PURCHASER)**

1.0	SWITCHGEAR	
1.1	Type	Air insulated with VCB type circuit breaker
1.2	Service	Indoor
1.3	Mounting	Free standing, floor mounted
1.4	System Voltage	33 kV
1.5	Voltage variation	+/- 10%
1.6	Frequency	50 Hz +/- 5%
1.7	Phase	3
1.8	Rated voltage	36 kV
1.9	Rated current	Bus 2000 A. CB 1250 A Bus raiser in Incomer and Bus coupler also shall carry 2000 A
1.10	Short time rating for 3 sec.	25KA
1.11	Internal arc classification and rating	
1.11.1	Classification	IAC – A – FLR
1.11.2	Rating	25 KA for 1 second for main bus & breaker chamber and 25KA for 0.5 sec for cable chamber.
1.12	Insulation level (PF rms /Impulse peak)	70 kV/ 170 kV (195 kV preferable)
1.13	System ground	Effectively earthed
1.14	Enclosure degree of protection	IP 4 X for HV compartment IP 5 X for LV compartment
1.15	Bus bar - Main	3 Nos. rated voltage resin cast insulated solid round/rectangular copper bus bar with a current density of 1.6 amps per sq.mm. suitable for highest system voltage shall be provided. Solid core (touch proof) insulated type is also acceptable.
1.15.1	Material	Tinned Electrolytic 99.9% copper
1.15.2	Bus bar joints	The busbar joints shall be insulated by preformed insulation and shall be detachable type. The insulating material used shall be capable of withstanding the heating effects of the rated short time current without permanent deformation or deterioration.
1.16	Spacing between the Busbars between live part to live part and live part to earth in mm	As per type tested design. Capable of withstanding the appropriate power frequency test voltage and internal arc. Size and spacing shall be as per type tested drawing. Epoxy moulded bus bars are preferred. Right angle boot of reputed make shall be provided inside

		cable chamber
1.16.1	Preferred spacing	Phase to phase 275 mm Phase to earth 240 mm
1.17	Insulating Material	Should be capable of withstanding the heating effect of the rated short time current without permanent deformation or deterioration.
1.18	Isolating plugs for VCB isolation	3 Nos. for the Buses and 3 Nos. for the line with necessary sockets along with automatic safety shutters, bus bar jumpers, etc. are to be provided in each panel
1.19	Bus identification	Colour coded
1.20	Temperature rise	As per IEC/IS. 40 deg. C for conventional joints. 55 deg. C for silver plated joints
1.21	Auxiliary bus bar	Resin cast insulated solid round/rectangular copper bus bar. Bus bars in cable chamber shall be provided with 33kV class HS sleeves/boot.
1.22	Auxiliary DC Supply	30 V/110 V DC
1.23	Auxiliary AC supply	240V single phase, 50Hz, AC with neutral grounded
1.24	Hardware	Stainless steel.
1.25	Earth bus	Copper
1.26	Power cable entry	From bottom and rear
1.27	Control cable entry	From bottom and rear
1.28	Cable charging switching test duty 2 (CC2)	50A for 33KV
1.29	Mechanical Endurance	Test conforming to Class M2 as per IEC 62271-100
1.30	Noise level at base and upto 50 metres	140 dB (max.)
1.31	Seismic acceleration	0.3 g
1.32	Isolation Transformers (440/230 V)	Shall be provided in the Transformer panel. The VA rating shall be so as to cater the load of 6 panels.

2.0	CIRCUIT BREAKER	
2.1	Voltage class, insulation level, short time rating	As specified for switchgear
2.2	Rated current	As specified for switchgear
2.3	Duty cycle	O-0.3s-CO-3Min-Co. Duty Cycle with O-0.3s-CO-15s-CO is preferable
2.4	Short circuit rating	33 Kv
2.4.1	A.C sym. breaking current	25KA

2.4.2	Short circuit making current	62.5 kA
2.5	Operation time	
2.5.1	Break time	≤40ms
2.5.2	Make time	≤60ms
2.6	Contacts	Flower/jaw types are to be provided on the truck side and free from atmospheric effects, other type of mating contacts shall not be accepted. They shall be mounted on the truck side only. Contact materials should be silver plated. The contacts shall be tested for 1250A and test certificate from NABL lab shall be furnished.
2.7	Breaker to control equipments on the LV chamber	24 pin plug and socket arrangements.
2.8	Close /Trip coil consumption	250 ± 25 Watts.
2.9	Range of Auxiliary Voltage	
2.9.1	Closing	85% - 110%
2.9.2	Tripping	70% - 110%
2.9.3	Spring Charging	85% - 110%
2.10	No. of spare aux. Contacts of Breaker, for Owner's use.	7NO + 7NC (2 NO + 2 NC to be wired up to control cubicle terminals for SCADA. Additional spare NO + NC contacts wired up to control cubicle shall be provided for indication of Spring charge and trip circuit healthy for SCADA). Rating shall be 30 Amps for making and 10 Amps for Breaking.
2.11	No. of spare contacts of Service and Test position limit switch	4 NO + 2NC
2.12	Insulation level of auxiliary contacts	1100 volts, 2.5 kV for 1 min.
2.13	Transient recovery voltage	67.9 kV

3.0	CURRENT TRANSFORMERS	
3.1	Voltage class, insulation level and short time rating	As specified for switchgear
3.2	Type	window/ring type, indoor resin cast, three core for Transformer & Bus coupler panels and 2 core for feeder panels
3.3	Class of insulation	Class E or better

3.4	Ratio	33 kV
	Transformer LV	1200-900/1-1-1 A
	Transformer HV	600-300/1-1-1A
	Bus coupler	1200-900/1-1-1 A & 600-300/1-1-1A
	Feeder	900-600/1-1A
3.5	Accuracy class	
3.5.1	Protection core	5P20
3.5.2	Protection (Diff)	PS
3.5.3	Metering	0.2 S
3.6	Burden (VA)	5VA for metering and 30 VA for protection
3.7	Excitation current of PSC Class CTs	30 mA at $V_k/2$

4.0	VOLTAGE TRANSFORMERS	
4.1	Type	Cast resin, draw out type, single phase units
4.2	Rated Voltage	
4.2.1	Primary	33 kV/Root 3
4.2.2	Secondary	110 V/Root 3
4.3	No. of phases	3
4.4	No. of secondary windings	1
4.5	Method of connection	Star/Star
4.6	Rated voltage factor	1.2 continuous and 1.5 for 30 seconds
4.7	Class of insulation	Class E or better
4.8	Accuracy class for Metering	0.2
4.9	Primary and secondary Fuses	HRC current limiting type, Primary fuse replacements shall be possible with PT in withdrawn position
5.0	HV FUSES	
5.1	Voltage class	36 Kv
5.2	Rupturing capacity	50kA
5.3	Rated current	As per application

6.0	SURGE ARRESTORS	
6.1	Rated Voltage	30 kV

6.2	Maximum continuous operating voltage (MCOV)	25 kV
6.3	Discharge current	10 kA
6.4	Discharge class	3
	All panels shall have suitable surge protection for DC controls at the DC source point. Provision shall be given to isolate the DC load of the SCADA system at a single point. The complete details of such protection shall be clearly indicated in the drawing.	

7.0	Static Trivector Meter (DLMS COMPLIANT METERS) with ABT TYPE A	
7.1	Type	3 Phase 4 wire 110V 1A 0.2S Class of Accuracy Type A
7.2	To read	with automatic and manual scrolling facility to read KWHr, KVAHr, RKVAHr, Voltage, Current, Power factor and instantaneous KW with optical port for downloading the load survey for 35 days and with MD reset push button and test terminal block
7.3	Software	Necessary software compatible with SANDS CMRI
7.4	Port	RS 485 port conforming to DLMS (RJ 11 compatible with IEC protocol for future) shall be provided. Opto coupler or one set potential free contact to translate the energy transmitted through the feeder to SCADA
		shall be provided. (RJ11 wiring configuration to be 6 pin connector, Pin configuration should be as follows: Pin No.1: No Connection Pin No.2: VCC Pin No.3 : Rx Pin No.4: Tx Pin No.5: Gnd Pin No.6 : No connection).
7.5	Communication Capability	The meter shall be provided with two ports for communication of the measured/collected data as per guideline document enclosed in the annexure, i.e. a hardware port with RS 485 conforming to DLMS protocol shall be provided. specification with multi- drop connections, which shall be used for remote access through suitable Modem (GPRS/GSM/EDGE/ CDMA/ PSTN/LPR) and for exporting data to substation data logger/ DCU/ Computer and server and an Optical port complying with hardware specifications detailed in IEC-62056-21. This shall be used for local data downloading through a DLMS compliant HHU. Both ports shall support the default and minimum baud rate of 9600 bps.
7.6	Applicable Standards	IS: 14697 /1999 (Reaffirmed 2004) IS-15707

7.7	General Technical Requirements	
7.7.1	Type	AMR Compatible Static, 3 Ph, 4 Wire Tri-Vector Energy Meter (In substation for Incoming/ Outgoing HTFeeders)
7.7.2	Frequency	50 Hz $\pm 5\%$
7.7.3	Accuracy class	0.2 S
7.7.4	Secondary voltage	Suitable for operation from 110V Ph-Ph or 63.5V Ph-N
7.7.5	Basic current- I_b	-/1 Amp
7.7.6	Maximum continuous current	2.0 I_b ; Starting and maximum current shall be as per IS-14697
7.7.7	Power consumption	The active and apparent power consumption, in each voltage circuit, at reference voltage, reference temperature and reference frequency shall not exceed 1.5 W and 8 VA. The apparent power taken by each current circuit, at basic current, reference frequency and reference temperature shall not exceed 1.0 VA
7.7.8	Power factor	0.0 Lag -Unity- 0.0 Lead
7.7.9	Design	Meter shall be designed with application specific integrated circuit (ASIC) or micro controller; shall have no moving part; electronic components shall be assembled on printed circuit board using surface mounting technology; factory calibration using high accuracy (0.02 class) software based test bench.
7.7.10	Quantities to be measured & displayed	Instantaneous Parameters such as phase and line voltages, currents, power factors, overall kVA, kW, kVAh, power factor, frequency. Block Load Profile Parameters such as kVAh/kWh/kVAh (lag/lead)/Maximum Demand (MD) in kW/kVA/power factor/phase and line voltages/currents etc (minimum 5 parameters). Daily Load Profile Parameters such as cumulative energy kWh (import/export)/cumulative kVAh (while
		kWh- import/export)/cumulative energy kVAh (quadrant-1/2/3/4)/reactive energy high ($V > 103\%$)/low ($V < 97\%$),.
	<p>Tamper details shall be stored in internal memory for retrieval by authorized personnel through either of the following: HHU.</p> <p>Remote access through suitable communication network.</p> <p>Minimum 200 numbers of events (occurrences & restoration with date & time) should be available in the meter memory.</p>	

8.0 Relay characteristics:

8.1	Type	Draw out Numerical with true RMS measurement
8.2	CT secondary	1 A
8.3	Burden	less than 1 VA
8.4	Auxiliary supply voltage	Suitable for DC voltage range from 18-150 Volts

8.5	IDMTL characteristic	1.3 and 3secs at 10 times set value of the current withtime set at unity.
8.6	Characteristics that should be set at the site.	IDMTL – 5% to 200% for OC in steps of 0.1 2% to 80% for E/F in steps of 0.1(Measured& Derived quantity) High Set – 10 % to 2000 % for OC in steps of 5 10 % to 800 % for E/F in steps of 1
8.7	Selection of curve	1.3 and 3 secs.
8.8	Time Multiplier setting	0 to unity continuously in steps of 0.01
8.9	Provisions to be given	<ol style="list-style-type: none"> 1. To store minimum of last ten fault data with date, timeand current. 2. Alpha – Numeric LED display of minimum 12 mmbacklit. 3. HMI for programming the relay. 4. Shall have self diagnostic features. 5. Shall have two set of NO and 1 set of NC potential freecontacts. 6. The relay should operate satisfactorily at ambient airtemperature ranging from 10°C to 50°C. 7. The relay should have inbuilt characteristics of blockingunscrupulous tripping. 8. The relay shall have suitable provision to take care ofsurges and inadvertent high voltage due to fault. 9. The relay should have Inrush blocking Protection. (2nd&5th Harmonics) 10. The relay should have sensing of Broken conductorfault. (All contact rating shall be 30Amps @ 3sec)
8.10	Trip circuit supervision scheme (Inbuilt feature innumerical relay is not acceptable. Separate TCSRelay shall be provided)	Testing of trip circuit healthiness is possible irrespective ofwhether the Circuit Breaker is in the closed or open position. The Trip Circuit Healthy LED should glow continuously in CB „ON“ Position and on demand in CircuitBreaker „OFF“ position. The rating of dropping resistancein series with Trip Circuit Healthy LED shall be such that the Trip Coil should not get damaged because of continuous current flowing through it.
	Upon TSR (trip circuit supervision relay) activation, there should be an alarm. The permissive command to close the breaker should be disabled (i.e.) the breaker should not be closed when the trip circuit is unhealthy. If there is loss of DC simultaneously inall the breakers, there shall be an alarm with indication.	

9.0 Mandatory type tests

9.1	Mandatory type tests	As per Schedule-F
9.2	Other type tests	<p>The bidder should furnish the following type test reports with offer or the same shall be submitted with drawing approval.</p> <p>A. Switchgear Panel</p> <ul style="list-style-type: none"> (i) Out of phase making & breaking test (ii) Single phase breaking capacity test. (iii) IP 5X for LV compartment <p>B. For bought out items as per the recommended make</p> <p>I. Current Transformer</p> <ul style="list-style-type: none"> a. Short Time Current Test b. Impulse Voltage Withstand Test c. Temperature Rise Test d. Determination of errors and ISF test <p>II. Potential Transformer</p> <ul style="list-style-type: none"> a. Impulse Voltage Withstand Test b. Temperature Rise Test c. Determination of errors.

10.0 Quality assurance plan

- i. Statement giving information about names of sub-suppliers, list of testing standards, list of tests normally carried out for bought out item.
- ii. Copies of test certificates in respect of following bought out items.
 - a. Vacuum Interrupter.
 - b. Insulators
 - c. Bus Bar Material
 - d. Instrument transformers.
 - e. Terminal connectors
- iii. List of areas in manufacturing process, where stage inspection are normally carried out by the tenderer for quality control and details of such tests and inspections.
- iv. List of testing equipment available with the tenderer for final testing of breakers visa-vis the type, special, acceptance and routine tests specified herein. The limitations in testing facilities shall be very clearly brought out in Schedule.

Drawings to be given

	Drawings to be given with bid	<ul style="list-style-type: none"> i) Instruction manuals ii) Catalogues of spares recommended with drawing to indicate each item iii) List of spares and special tools recommended by the supplier. iv) Type Test Certificates as per ISS Bidder shall also have to furnish the following drawings along with the offer <ul style="list-style-type: none"> (i) Principal dimensions of the 33 kV switch gear, (ii) GA for tendered panels including main bus as well as link bar arrangements, its foundation details etc., (iii) Typical single line diagram for 33KV switch gear, (iv) Sectional view of incomer, bus coupler & feeder panels. (v) GA of Circuit Breaker truck, Current Transformer & Potential Transformer. (vi) Bill of material for complete switchgear
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Drawings to be given for approval before commencement of supply.

<ul style="list-style-type: none"> i. Foundation details for Switchgear for 33KV ii. Equipment door layout for incomer, bus coupler & feeder panels. iii. Schematic Diagram for incomer bus coupler & feeder section of Switchgear iv. Protection Circuit for incomer bus coupler & feeder section of Switchgear v. DC control circuit for incomer, bus coupler & feeder section. vi. Metering circuit for incomers, bus coupler & feeder section. vii. Annunciator and Alarm scheme. viii. P.T. supply change over scheme. ix. Terminal block details for incomer, bus coupler & feeder section. x. Cross section view for CTs. xi. Name Plate & Connection diagram for CTs. xii. Cross section view for PTs. xiii. Name Plate & Connection diagram for PTs. xiv. Drawing showing height and arrangement of 33KV bus bars including design calculations & loading data for its support insulators, xv. Vacuum interrupter drawing

ANNEXURE – I – GUARANTEED TECHNICAL PARTICULARS
(1) SCHEDULE OF GUARANTEED TECHNICAL PARTICULARS
FOR 33KV ID VCBs

Sl.No	Description	Offered by tenderer
01.	Manufacturer's Name and Country of origin	
02.	Manufacturer's Design / type Ref	
03.	Frequency	
04.	Rated Voltage	
05.	Highest system voltage	
06.	Rated current	
07.	Short Circuit current rating with duration	
08.	Certificate or report of short circuit type test	
09.	Rated operating duty cycle	
10.	Short Circuit Breaking Current : (a) Symmetrical (b) Symmetrical at rated voltage (c) Asymmetrical at rated voltage (i) Per Phase (ii) Average (iii) D.C. Component	
11	Arcing time (at rated breaking current) in ms.	
12	Opening time	
13	Total break time in milli sec. (a) At 10% rated interrupting capacity (b) At rated interrupting capacity	
14.	Breaking Current (a) Rated out of phase current (b) Rated cable charging current (c) Rated kilometric fault level (d) Rated capacitor breaking current	
15	Make time in ms.	
16.	Maximum temp. rise over ambient (a) Main contacts (b) Terminals	
17.	Rated re striking voltage at 100% and 50% rated capacity (a) Amplitude factor (b) Phase factor (c) Natural frequency (d) R.R.R.V. (Volts/Micro Sec.)	
18.	Dry 1 minute power frequency withstand test voltage (a) Between line terminal and Earth KV rms (b) Between terminals with breaker contacts open	

19.	1.2/50 full wave impulse withstand test voltage (a) Between line terminal and Earth KV p (b) Between terminals with breaker contacts open KVp	
20	Spacing between Busbars (Live part to live part)	
21	Spacing between Live part to Earth	
22	Vacuum Interrupter Make	
23	Contact separation Distance	
24	Type of main contacts	
25	Contact pressure	
26	Contact Resistance	
27	Life of the Interrupter (In no of operations) (i) Tripping at Rated current (ii) Tripping at maximum fault current (Allowable maximum erosion 3mm) (iii) Mechanical operations	
28	Details of main contacts making contact with the Breaker truck with the panel	
29	Control Circuit Voltage AC / DC	
30	Power required for Closing Coil at 30 V /110 V	
31	Power required for Tripping Coil at 30V / 110V	
32	Whether Trip free or not	
33	Whether all the interlocks provided	
34	Overall dimensions	
35	Gauge of the MS sheet used for the fabrication of the cubicle	
36	Total weight of one complete Breaker	
37	Whether truck lifting/lowering mechanism provided if the breaker positioned in the panel at a height	

PLACE:
DATE:
COMPANY SEAL:

SIGNATURE :
DESIGNATION :
COMPANY :

(2) SCHEDULE OF GUARANTEED TECHNICAL PARTICULARS FOR
33KV CURRENT TRANSFORMERS

Sl.No	Description	Offered by tenderer
01.	Manufacturer's Name and country of origin	
02.	Manufacturer's design Ref / Model	
03.	Applicable Standards	
04.	Type	
05.	Rated Primary current	
06.	Rated secondary current	
07.	Rated frequency	
08.	Transformation ratios	
09	Number of cores	
10	Rated output (a) For Core -I (b) For Core-II (c) For core III	
11	Class of insulation	
12	Class of accuracy (a) For metering (b) For Protection	
13	Short circuit current rating and its duration	
14	Secondary resistance at 70 Deg.C	
15	Continuous over load (percentage)	
16	One minute power frequency dry withstand voltage	
17	1.2/50 micro sec. impulse withstand test voltage	
18	One minute power frequency withstand test voltage on secondary	
19	Instrument safety factor	
20	Type of primary winding	
21	Literature/leaflets pamphlets about the current transformer offered	

PLACE :
DATE :
COMPANY SEAL :

SIGNATURE :
DESIGNATION :
COMPANY :

(3) SCHEDULE OF GUARANTEED TECHNICAL PARTICULARS FOR
33KV POTENTIAL TRANSFORMERS

Sl.No	Description	Offered by tenderer
01.	Manufacturer's Name and country of origin	
02.	Manufacturer's design reference	
03.	Applicable Standards	
04.	Type	
05.	Ratio	
06.	Rated Primary voltage	
07.	Rated secondary voltage	
08.	Rated frequency	
09.	Class of accuracy	
10.	No. of phase and method of connection	
11.	Burden	
12.	One min. power frequency dry flash over voltage	
13.	1.2/50 micro sec. impulse withstand test voltage	
14.	Class of insulation	
15.	Insulation level	
16.	Min. Creepage distance	
17.	Rated voltage factor and time	
18.	Temperature rise at 1.2 time rated voltage and burden	
19.	Variation in ratio and phase angle error	
20.	Max. ratio error with rated burden and 5% normal primary voltage.	
21.	Technical literature pamphlets about the PTs offered	

PLACE :
DATE :
COMPANY SEAL :

SIGNATURE :
DESIGNATION :
COMPANY :

(4) SCHEDULE OF GUARANTEED TECHNICAL PARTICULARS FOR NUMERICAL RELAYS

Sl.No	Description	Offered by tenderer
01.	Manufacturer's Name and Country of origin	
02.	Manufacturer's design Ref / Type	
03.	Applicable Standards	
04	Current setting range for	
	(a)Over current	IDMTL
		Instantaneous
	(b) Earth-fault relay	IDMTL
		Instantaneous
05.	Details on IDMTL characteristics	
06	Whether High Set is Transient free	
07	Whether separate Time setting for IDMTL / Instantaneous Elements available	
08	Whether Relay senses True RMS Current	
09.	Accuracy for different settings and limits of errors	
10	Whether settings site selectable and HMI provided	
11	Whether Alpha Numeric / LCD display	
12.	Whether Compatible for 18-150V DC	
13	Whether Compatible for 1 A CT Secondary	
14	Whether Self diagnostic features available	
15	Whether Communication Port RS 485 Compatible for MODBUS / IEC /61850 Protocol	
16	Whether Blocking characteristics available for blocking the unscrupulous tripping of Upstream Breakers	
17.	Whether draw out type unit or not	
18.	Types of case	
19.	Reset time	
20.	Burden of relay	
21.	Maximum and Minimum operating ambient air temperature	
22.	Whether technical literature pamphlets offered. for the Relay	

PLACE :
DATE :
COMPANY SEAL :

SIGNATURE :
DESIGNATION :
COMPANY :

5) Schedule of Guaranteed Technical Particulars for Static Trivector Meter(DLMS COMPLIANT METERS) with ABT Type A

Sl.No.	Description	Offered by tenderer
1	Maker's Name & Country	
2	Type	
3	Application	
4	Rated Voltage	
5	Rated Current	
6	Frequency	
7	Overload capacity	
8	Minimum starting current in % of basic current	
9	Power loss in potential circuit	
10	Power loss in current circuit	
11	Change in error due to	
	a.Variation in frequency	
	b.Variation in temperature	
	c.Variation in Voltage	
12	Accuracy Class	
13	Total weight of meter	
14	Details of case	
15	H.V. Withstand	
16	Insulation resistance	
17	Standard to which the meter confirm	
18	Type of energy Registration Mechanism	
19	MD Reset Mechanism	
20	Insulation Test	
21	Temperature Co-efficient from 10% of rated load to 100% of rated load (5°C to 45°C	
22	Working Range	
	a.Voltage	
	b.Current	
23	Type of load (linear, non linear, balance, unbalanced at any P.F.)	
24	Display details	
	a.Display cycle	
	b.Period of display in each parameter	
	c.Display scroll lock facility	
	d.Backlit LCD	
25	Memory	
26	Non Volatile Memory	
27	Power on in absence of mains	
28	Tamper data preservation capacity	
29	Load survey	
	a.Parameter logged	
	b.Logging interval	
	c.No. of days of load survey	
30	Time of the day Zone	

31	Capability for fraud Prevention & detection	
32	Sealing Arrangement	
	a.Meter Cover	
	b.Terminal Block Cover	
	c.MD Reset Push Button	
	d.Optical port	
	e.Additional Communication Port	
33	Type of communication	
	a.Local Optical Port	
	b.Additional Communication Port	
34	Real time clock	
35	Whether the meter carries any certification mark	
36	Self diagnostic feature if any (provide details) Principle of operation (provide details)	

Date :

**SIGNATURE OF THE
TENDERER**

Place :

NAME

**STATUS IN THE COMPANY
(Affix Seal of the company)**

ANNEXURE-II
QUESTIONNAIRE-A

- (a) Strike off, whichever is not applicable.
(b) Separate sheets should be used, wherever necessary:

Sl. No	PARTICULARS	BIDDER'S RESPONSE
1	Name & Address of the Firm / Company (a) Registered Office (b) Factory / works Address (c) Fax No. (d) Telegraphic Address (e) E-mail ID (f) GSTIN No. (g) PAN No.	
2.	Name, Designation & Address of the person signing the tender	YES / NO
3.	(a) Whether the Company is Small Scale/Medium Scale/Large Scale Unit (b) If so, Write registration No. (c) Is SSI Unit registered with DIC/ Tamil Nadu or NSIC (period of validity to be mentioned)	YES/NO YES / NO
4.	Whether tenderer is manufacturer of 33KV Indoor VCB panels having manufacturing facility in India If yes, whether necessary proof for manufacturer viz Manufa cturing license, ISO certificate, NSIC certificate, BIS License, UAM etc., has been furnished. (or) Whether tenderer is Licensed/Authorised Channel Partner of the OEM having manufacturing facility in India If yes, whether proof for the following have been furnished: a) Manufacturing by OEM b) Channel Partner/Dealership certificate or any documenttowards proof of Channel Partners c) Undertaking by the OEM as in Annexure-IV Whether the bidder has supplied a minimum of 14 Nos. of 33KV Indoor VCB panels of offered make to State Electricity	YES / NO YES / NO YES/NO YES/ NO YES / NO

	<p>iv. If SSI unit state whether copy of duly attested Permanent Registration Certificate enclosed</p> <p>v. Whether the material tendered is included in the certificate</p> <p>vi. Validity of the permanent registration certificate</p> <p>vii. Whether undertaking on a non-judicial stamp paper of value more than Rs.100/- (Rupees Hundred only) enclosed in lieu of EMD</p>	<p>Yes/No</p> <p>Yes/No</p> <p>Yes/No</p>
8.	<p>TYPE TEST CERTIFICATES:</p> <p>Whether the copy of the Type Test Certificates for the tests prescribed in Schedule – F is enclosed along with the tender</p> <p>NOTE: If the copy of Type Test Certificates are not enclosed along with the tender offer, the tender offer will be summarily rejected. Type Tests should have been issued not earlier than Ten years as on the date of Tender opening. Otherwise the Type Test Report will be considered as invalid.</p>	YES / NO
9.	<p>VALIDITY:</p> <p>Whether your offer is valid for a period of 180 days from the date of opening of Commercial / Technical Bids (Offers with validity period of less than 180 days are liable to be rejected)</p>	YES / NO
10.	<p>PRICE:</p> <p>(a) Whether quoted firm price valid for the entire contract period.</p> <p>(b) Whether the following break ups for the quoted Unit Price (All-inclusive price) have been mentioned</p> <p>Unit Ex-Works Price</p> <p>Freight & Insurance Charges</p> <p>Whether GST (Percentage & Amount) applicable has been mentioned separately</p> <p>(c) Confirm that price quoted is after accounting for ITC.</p>	<p>YES / NO</p> <p>YES / NO</p> <p>YES / NO</p> <p>YES / NO</p> <p>YES / NO</p>

	<p>(d)Whether you are agreeable, in case of delayed delivery, the GST prevailed on the date of actual delivery or the GST applicable on the last day of the contractual delivery period whichever is less shall only be payable.</p> <p>(e)Confirm that Freight & Insurance Charges quoted are applicable for delivery to any of TANTRANSCO stores in Tamil Nadu.</p> <p>NOTE: If no breakup details for the quoted price is given, the offer will be liable for rejection.</p>	<p>YES / NO</p> <p>YES / NO</p>
11.	IT- PAN & GSTIN No.	
	(a) Whether PAN No. issued by IT Department is furnished.	YES / NO
	(b) Whether GSTIN No. along with proof is furnished.	YES / NO
12	Whether you are agreeable for the following clauses specified under Section-V of the Specification:	
	(a) Payment Terms (Clause 7.0)	YES / NO
	(b) Security cum performance (Clause 8.0)	YES / NO
	(c) Delivery (Clause 9.0)	YES / NO
	(d) Liquidated Damages (Clause 12.0)	YES / NO
	(e) Guarantee (Clause 14.0)	YES / NO
	(f) Jurisdiction for Legal Proceedings (Clause 39.0)	YES / NO
13	Quantity Offered	----- nos.

Date :

SIGNATURE OF THE TENDERER

Place :

UNDERTAKING

I , Sole Proprietor / Partner of
M/s...../
..... give undertaking that details
given in the above QUESTIONNAIR - A are correct to the best of my
knowledge and I agree to abide by all your Tender / Order terms &
conditions.

Date :
TENDERER

SIGNATURE OF THE

Place :

NAME

STATUS IN THE COMPANY
(Affix Seal of the company)

ANNEXURE-III
QUESTIONNAIRE-B

INSTRUCTIONS:

- (a) Strike off, whichever is not applicable
- (b) Separate sheets should be used, wherever necessary.

Sl. No	PARTICULARS	BIDDERS RESPONSE
1a.	Whether materials offered is exactly as per Technical Specification (Section-VII) (Offers with Deviation in Technical Terms are liable to be rejected)	YES / NO
b.	If not, Whether the details of technical deviation are furnished in Schedule-C1 .	YES / NO
2.	Whether the tendered equipment is type tested as per the specification of TANTRANSCO.	YES / NO

Date :

Place :

SIGNATURE OF THE TENDERER

NAME

STATUS IN THE COMPANY
(Affix Seal of the company)

ANNEXURE -IV

PROFORMA OF TOTAL BACK – UP GUARANTEE BY OEM

To
The Chief Engineer/Transmission,
4th Floor, Southern wing, TANTRANSCO Building,
New No.144, (Old No.800) Anna Salai,
Tamil Nadu Transmission Corporation Limited,
Chennai-600 002. (India)

Sub:
Ref:

With reference to the proposal submitted by
.....we M/s.....
.....having our corporate office
at.....have associated with
M/s.....for executing the contract required for the Supply of 33KV Indoor Vacuum
Circuit Breaker Panels, as per TANTRANSCO's specification No.T- . We confirm having
studied your specification and the bid documents submitted by
M/s.....We, M/s.....(OEM) hereby certify and
guarantee as follows and confirm our participation throughout the execution of the
Project including the warranty period.

- 1) All design, engineering manufacture, inspection and testing at manufacturer's works, supply and delivery at site, assembly, erection, testing, Performance testing and commissioning handing over as well as review shall be done by us under a Quality Assurance Programme approved by TANTRANSCO.
- 2) We Guarantee the sequential and timely execution of the Contract works required for the project as per the agree project schedule.
- 3) We guarantee the performance of the Contract works as specified in the tender specification.
- 4) We guarantee to provide all necessary assistance during the warranty period for maintaining the system to meet the tender specification requirement.
- 5) We hereby Guarantee to extend our full technical support, total back up guarantee for design, engineering, manufacture, supply, erection, testing, commissioning, Performance testing, handing over and after sales service including spares, tools etc. as per TANTRANSCO's requirement under specification No.T- , against this invitation of bid.
- 6) We do hereby authorize M/s....., a company registered under the Indian Companies Act.1956, having registered office at and Regional office atto bid, negotiate and conclude the Contract with TNEB against the above bid for the equipment and services to be supplied by us.
- 7) We along with M/s.....are held jointly and severely bound to TANTRANSCO for the successful execution of the entire Contract works as per specification for the above project.

We hereby agree,

a) To depute technical experts from time to time M/s.....works at.....for the implementation of the contract works at mutually agreed between TANTRANSCO and M/s.....to discharge obligations as stipulated in the Contract.

b) To attend the key design definition/review meeting called for by TANTRANSCO during various stages of Project implementation/Commissioning/warranty maintenance of Contract. We along with M/s.....hereby agree that this undertaking shall be irrevocable and shall form an integral part of the Contract.

Yours faithfully,

i) BIDDER

Signature.....

NAME..... COMPANY SEAL

Designation

ii) OEM

Signature

NAME COMPANY SEAL

Designation

Note : THE ABOVE UNDERTAKING SHOULD BE EXECUTED ON NON-JUDICIAL STAMP PAPER OF VALUE NOT LESS THAN Rs.100/- AND SHOULD BE SIGNED BY THE BIDDER AND THE AUTHORIZED EXECUTIVE DIRECTOR OF THE OEM AND SUBMITTED ALONGWITH THE TECHNO-COMMERCIAL BID.

SECTION – VIII – FORMATS
SCHEDULE - `A'- PRICE SCHEDULE`
(To be filled in by the Tenderer)

Sl. No	Description of Materials	HSN Code	Qty. in Nos	Unit price			FOR (D) * Price in Rs.	
				Ex-works price	F&I Charge	CGST/SGST/IGST in % and Amount	UNIT PRICE	TOTAL VALUE
1)	33 KV,1250 A, 25 KA Indoor Vacuum Circuit Breaker suitable for transformer (LV)							
2)	33 KV,1250 A, 25 KA Indoor Vacuum Circuit Breaker suitable for Bus coupler with bus raiser.							
3)	33KV,1250 A, 25 KA Indoor Vacuum Circuit Breaker suitable for feeder.							
(To be filled by the Tenderer in BOQ format only)								

COMPANY SEAL :

SIGNATURE :
DESIGNATION :
COMPANY :
DATE :

SPECIAL NOTE: The bidders are requested to quote the rates as per BOQ .

NOTE 1 :	Rates quoted shall be both in Words & Figures
NOTE 2 :	In case of discrepancy between prices quoted in words and in figures, lower of the two will be taken for evaluation.
NOTE 3:	While quoting the rates the bidder shall indicate the HSN Code and Account Code for all the tendered items as per GST Act.

SCHEDULE - 'B'
SCHEDULE OF MATERIALS
(TO BE FILLED IN BY THE TENDERER)

Sl. No	Description	Quantity tendered in nos.	Quantity offered in nos.
1)	33 KV,1250 A, 25 KA Indoor Vacuum Circuit Breaker suitable for transformer (LV)		
2)	33 KV,1250 A, 25 KA Indoor Vacuum Circuit Breaker suitable for Bus coupler coupler with bus raiser.		
3)	33 KV,1250 A, 25 KA Indoor Vacuum Circuit Breaker suitable for feeder.		

COMPANY SEAL :

SIGNATURE :

DESIGNATION :

COMPANY :

DATE :

SCHEDULE – C1

DEVIATION FROM TECHNICAL SPECIFICATION

All technical deviations from the specification shall be filled in by the Tenderer, clause by clause, in the Schedule.

SECTION NO.	CLAUSE NO.	DEVIATION

The Tenderer hereby certifies that the above mentioned are the only deviations from the TECHNICAL Specification and the tender confirms to the specification in all other respects.

COMPANY SEAL:

SIGNATURE :

DESIGNATION :

COMPANY :

DATE :

SCHEDULE – C2

DEVIATION FROM COMMERCIAL TERMS

All deviations from the commercial terms shall be filled in by the Tenderer, clause by clause, in the Schedule.

SECTION NO.	CLAUSE NO.	DEVIATION

The Tenderer hereby certifies that the above mentioned are the only deviations from the Commercial terms of the Specification.

COMPANY SEAL:

SIGNATURE :
DESIGNATION :
COMPANY :
DATE :

SCHEDULE – D

STATEMENT OF SUPPLY ORDERS EXECUTED/UNDER EXECUTION DURING THE PAST THREE YEARS AS ON THE DATE OF TENDER.

Sl.No	Name and address of the organization	Name of material	P.O.No. & Date	Qty.	Value of order in Rs. Lakhs	Scheduled date of completion of order	Actual date of completion of order
1	2	3	4	5	6	7	8

COMPANY SEAL:

SIGNATURE :

DESIGNATION :

COMPANY :

DATE :

SCHEDULE – E
SPECIFICATION NO. T-2235
DECLARATION FORM

To

The Chief Engineer /Transmission ,
Tamil Nadu Transmission Corporation,
4th floor,Southern wing,
No.144, Anna Salai,
Chennai – 600 002.

Dear Sir,

1.Having examined the above specification together with the accompanying schedules etc., we hereby offer to manufacture and supply the equipments/materials covered in this specification at the rates entered in the attached schedule of prices.

2. We hereby guarantee the particulars entered in the schedules attached to the specification.

3..In accordance with security deposit cum performance guarantee clause Section-VI of the specification, we agree to furnish security deposit cum performance guarantee to the extent of 3% of value of Purchase Order issued during the rate contract period valid till the expiry of guarantee period.

4.Our company is not a potentially Sick Industrial Company or a Sick Industrial Company in terms of Section-23 of Section-15 of the Sick Industrial Companies (Special Provisions) Act, 1985.

Yours faithfully,

PLACE	:	SIGNATURE	:
DATE	:	DESIGNATION	:
COMPANY SEAL	:	COMPANY	:

SCHEDULE – F
STATEMENT OF TYPE TEST PARTICULARS
(To be filled in by the Tenderer)

Sl.No.	Name of Test	Name of Lab	Date of Test
01.	Short time current withstand test and peak current withstand test. (25 KA for 3 sec & 62.5 KA peak)		
02.	Lightning Impulse voltage with-stand test (170KV peak)		
03.	Basic short circuit test duties 1-5 (T10, T30, T60, T100s, T100a)		
04.	Power frequency voltage withstand test(dry) (70 KV rms for 1 min)		
05.	Temperature rise test for 2000A for Bus bar.		
06.	Mechanical Endurance Test conforming to class M2 of IEC / 62271 – 100		
07.	Cable charging switching test duty 2(CC2) for 50A for 33KV		
08.	Measurement of resistance of the main circuit.		
09.	Internal arc fault withstand test on cable, main bus and breaker. (Main bus & Breaker chamber – 25 KA for 1 sec; Cable Chamber – 25 KA for 0.5 sec)		
10.	IP 4X for HV Compartment.		

COMPANY SEAL :

SIGNATURE :

DESIGNATION :

COMPANY :

DATE :

NOTE : The above type tests should have been conducted in a Government/Government recognized Laboratory within ten (10) years as on the date of Tender Opening as per latest IEC 62271-100.

SCHEDULE-G

UNDERTAKING TOWARDS JURISDICTION FOR LEGAL PROCEEDINGS

(To be filled by the tenderer in a non-judicial stamp paper of value not less than Rs.100/-)

This undertaking executed aton this(date)(month) two thousand andby M/s..... a company registered under Companies Act, 1956 having its Registered Office at hereinafter called the Contractor (which expression shall where the context so admits mean and include its successors in office and assigns) with the Tamil Nadu Electricity Board, a statutory authority created under the powers vested with the Electricity (supply) Act, 1948, having its office at No.144, Anna Salai, Chennai – 2 hereinafter called the purchaser (which expression shall where the context so admits means and includes its successors in office and assigns).

WHEREAS the contract is for the supply ofin terms of the Purchase Order No.....dated.....

AND WHEREAS in accordance with Clause.....of the above said P.O. certain terms were stipulated for the above supply.

AND WHEREAS in accordance with clause.....of the above mentioned Purchase Order, the contractor has to furnish an undertaking that no suit or any proceedings in regard to any matter arising in any respect under this contract shall be instituted in any court other than in the High Court, Madras, City Civil Court of Chennai or other court of small causes at Chennai.

In consideration of the Board having agreed to accept the undertaking, the contractor undertakes that no suit or any proceedings in regard to any matter arising in respect of this contract shall be instituted in any court other than in the High Court, Madras, City Civil Court at Chennai or the Court of Small causes at Chennai. It is also agreed that no other court shall have jurisdiction to entertain any suit or proceedings, even though, part of the cause of action might arise within their jurisdiction. In case, any part of the cause of action arises within the jurisdiction of any of the courts in Tamil Nadu and rest within the jurisdiction of any of the courts in Tamil Nadu and rest within the jurisdiction of Courts outside Tamil Nadu, then it is agreed to between the parties that such suits or proceedings shall be instituted in a Court within the State of Tamil Nadu and no other court outside. Tamil Nadu shall have jurisdiction even though any part of the cause of action might arise within the jurisdiction of such Courts.

IN WITNESS WHEREOF THIRUof the contractor hereby put his hand and seal for due observe of the undertaking in the presence of the following witnesses.

SIGNATURE WITH SEAL.

WITNESS :

- 1) (Signature with Name and Address)
- 2) (Signature with Name and Address)

SCHEDULE- H
UNDERTAKING TOWARDS INPUT TAX CREDIT

(Declaration to be submitted by the bidders in Non-Judicial Stamp paper of value not less than Rs.100/-)

To
The Chief /Transmission
TANTRANSCO

We hereby declare and confirm that we are registered vendor under GST Act having GSTIN in State of . Our applicable GST% for the above reference job is under code

We hereby declare and confirm that we are unregistered vendor under GST Act being turnover is less than Rs. Lakhs (being threshold limit) per annum. (For unregistered vendor, the vendor has to submit an affidavit in the enclosed format).

We hereby declare and confirm that we are registered vendor under composite scheme having GSTIN.

We are aware that as per sec 171 of CGST Act, any reduction in rate of tax on any supply of goods or services or the benefit of input tax credit should be passed on to TANTRANSCO by way of commensurate reduction in prices and as such we hereby declare that we are extending Rs. /- of % as rebate in my awarded price against input tax credit benefit.

We hereby declare that we do not have any input tax credit benefit on account of GST applicable against this job. If it is established that we have availed input tax credit benefit against this job, the differential tax benefit will be returned to TANTRANSCO failing which TANTRANSCO may take appropriate action.

Signature of bidder with Company Seal.

Witness with address:

- 1)
- 2)

Note: Bidder may strike out the para not applicable

SCHEDULE-I
IRREVOCABLE BANK GUARANTEE IN LIEU OF EARNEST MONEY DEPOSIT
(In Rs.100/-Non-Judicial Stamp paper)

THIS DEED OF GUARANTEE made on this Day of Two thousand andby the(Bank)., at(address of the bank) under the Act, 1969 and having its central office at , and amongst other places branch athereinafter referred to as the "BANKS"), to and in favour of TANTRANSCO, a Company registered under the Company's Act 1956 having the office at No.144, Anna Salai, Chennai- 2, represented by the (hereinafter called the 'Purchaser').

Whereas M/s.....(hereinafter called the ('Bidder')) have by virtue of participating in the tender floated by the Purchaser as per Tender Specification No.....agreed with the Purchaser to in accordance with the terms and conditions contained therein.

AND WHEREAS in accordance with the terms of the Tender Specification No.....Dt....., the Bidder has to pay a sum of Rs. ----- (Rupees -----only) towards Earnest Money Deposit or furnish an irrevocable bank guarantee from a nationalized bank for an amount specified in the tender specification for the purpose of participating in the tender and adherence to the terms and conditions mentioned in the Tender Specification.

AND WHEREAS the bidder has requested the Purchaser to accept irrevocable bank guarantee from nationalized bank in lieu of Earnest Money Deposit for an amount specified in the tender specification for the purpose of participating in the Tender and adherence to the terms and conditions mentioned in the Tender Specification.

AND WHEREAS the Bank has at the request of the bidder, agreed to guarantee the payment of the said sum in case the tender procedures is not adhered in accordance with the specifications indicated in the terms and conditions contained in Tender specification No..... dt.....

NOW THE DEED WITNESSES AS FOLLOWS:

In consideration of the purchaser having agreed to accept the irrevocable bank guarantee from a Nationalized Bank, towards the Earnest Money Deposit of the materials/system supplied for a sum equivalent to Rs.....(value of the tender specification to be entered) (Rupees.....only) the Bank do hereby guarantees that if the bidder fails to perform the tender procedures in accordance with the specifications and conditions of the purchase order and as subsequently amended, the Bank shall pay forthwith merely on demand without any demur to the purchaser such amount or amounts, as the Bank may be called upon to pay by the Purchaser.

PROVIDED that the liability of the bank under this deed shall not at any time exceed the said sum of Rs...../- (Rupeesonly)

PROVIDED FURTHER that the guarantee hereunder furnished shall be released as soon as the bidder has completed the tender procedures to the satisfaction of the purchaser in accordance with the terms and conditions specified in the tender specification and the period of one year is over and a certificate to that effect is issued by the purchaser.

The bank further undertakes to indemnify the purchaser against any loss or damage that may be caused or suffered by the Bidder by reason of any breach of the terms and conditions in the said Tender Specification No..... .

The guarantee herein contained shall remain in force till the terms and conditions of the Tender specification Nohave been fully and properly carried out by the said contractor and in any case, the guarantee shall not hold good after the expiry of

The Bank further agree with the purchaser that the purchaser shall have the fullest liberty (without the consent of the Bank and without affecting in any manner the obligations of the Bank hereunder) to vary any of the terms and conditions mentioned in the tender specification or to extend the time of validity of the bank guarantee by the said contractor from time to time or to postpone from time to time any of the powers exercisable by the purchaser against the said bidder and to forebear or to enforce any of the terms and conditions relating to the said tender specification and the Bank shall not be relieved of its liability by the reason of any such variations or extension being granted to the reason to the said bidder or by reason of any forbearance, act or omission on the part of the purchaser or any indulgence by the purchaser to the said contractor or by any such matter or things what-so-ever which under the law relating to sureties would but for these provision have the effect of so relieving the Bank.

Any account settled between the purchaser and the bidder shall be the conclusive evidence against the Bank for the amount due and shall not be questioned by the Bank.

The expressions "Bank", "Bidder" and the 'PURCHASER" herein before used shall include their respective successors and assigns.

IN WITNESS WHEREOF THIRU acting for and on behalf of the bank and signed this deed on the day, month and year first above written.

In the presence of witness:

1.

Signature with the seal of the Bank (Name in Block letters)

2.

(Name in capitals to be subscribed
with designation, office address or residential address)

SCHEDULE -J
UNDERTAKING IN LIEU OF E.M.D.

(To be furnished in non-judicial stamp paper of value not less than Rs.100/-)

THIS DEED OF UNDERTAKING EXECUTED AT-----ON THIS THE-----
-----DAY OF-----TWO THOUSAND by M/s.-----
-----hereafter called "Tenderer" (which expression shall where the
context so admits mean and include their Agents, Representatives, Successors-in-office and
Assigns).

TO AND IN FAVOUR OF -----THE TAMIL NADU
TRANSMISSION CORPORATION LIMITED, a Body Corporate constituted under the Electricity
(Supply) Act, 1948 (Central Act LIV of 1948) having its office at 4th Floor (Southern wing) ,
TANTRANSCO Building, No.144, Anna Salai, Chennai – 600 002, herein called the "TANTRANSCO"
(which expression shall where the context so admits mean and include its successors in office and
Assigns).

WHEREAS THE tenderer is required to pay Earnest Money Deposit of
Rs-----for participation in the tender for supply of-----
-----in terms of specification No-----

AND WHEREAS the tenderer is exempted by the TANTRANSCO from payment of EMD in the form
of cash, subject to the tenderer executing an undertaking to the value of
Rs.....(Rupees.....) representing the amount equivalent to the amount
of EMD specified to be paid to the TANTRANSCO in the event of non-fulfillment of breach of any of
the conditions of the tender by the Tenderer as mentioned hereunder.

AND WHEREAS in consideration of the acceptance by the TANTRANSCO of the above proposal,
The tenderer has agreed to pay to the TANTRANSCO the said amount of Rs-----
-- in the event of:-

- (1) Withdrawing his tender before the expiry of the validity period, OR
- (2) Withdrawing his tender after acceptance, OR
- (3) Violating any of the conditions of the tender issued by the competent authority;

NOW THIS UNDERTAKING WITNESSES that in pursuance of the said agreement the Tenderer
hereby doth covenant with the TANTRANSCO that in consideration of the "TANTRANSCO" waiving
the condition of payment of EMD in cash in terms of the said specification, the Tenderer has agreed
to pay to the TANTRANSCO Rs..... only) in the event of :

- (i) Withdrawing his tender before the expiry of the validity period.
- (ii) Withdrawing his tender after acceptance.
- (iii) Violating any of the conditions of the tender issued by the competent authority.

NOW THE CONDITION OF THE above written undertaking is such that if the tenderer shall duly and
faithfully observe and perform the conditions specified as above, then the above written
undertaking shall be void, otherwise it shall remain in full force.

The tenderer undertakes not to revoke this guarantee till the contract is completed under the terms of contract.

The expression, 'tenderer' and the 'TANTRANSCO' hereinafter before used shall include their respective successors and assign in office.

IN WITNESS WHERE OF THIRU----- acting for and on behalf of the Tenderer has signed this deed on the day, month and year herein before first mentioned.

SIGNATURE

NAME IN BLOCK LETTERS

SEAL OF THE COMPANY

In the presence of Witnesses:

1. Signature
Name & Address
2. Signature
Name & Address