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ODISHA POWER TRANSMISSION CORPORATION LIMITED

(A Govt. of Odisha undertaking)

CIN – U40102OR2004SGC007553

REGD. OFFICE: JANPATH, BHUBANESWAR-751022,
OFFICE OF THE GENERAL MANAGER (Elect)
EHT (O&M) CIRCLE, BHUBANESWAR
AT-Grid Sub-Station, Chandaka, PO-KIIT
Bhubaneswar-751024

E-mail - ehtm.cle.bbs@optcl.co.in

E-TENDER SPECIFICATION NO:- EHTM/GM/06/BBS/2022-23

PART-I

SECTION-I-	INSTRUCTION TO BIDDERS
SECTION-II-	GENERAL TERMS & CONDITIONS OF CONTRACT
SECTION-III-	LIST OF ANNEXURE
SECTION-IV-	DATASHEETS

PART-II

PRICE BID & COMMERCIAL BIDS (EXCEL SHEET FORMAT)

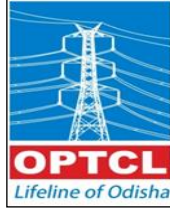
Request for online tender documents:	From Dt. 01.03.2023 (14:00 Hrs)
	To Dt. 20.03.2023 (16:00 Hrs)
Issue of online tender documents (bid sheets):	From Dt. 01.03.2023 (14:01 Hrs)
	To Dt. 20.03.2023 (16:01 Hrs)
Last date of submission of online tender:	Up to Dt. 20.03.2023 (17.00 Hrs)
Date of opening of Tender	on Dt. 21.03.2023 (11:30 Hrs)

TELEPHONES / CONTACTS

1. General Manager: 9438907492
2. Manager: 9438907583

NOTE: -

1. In case the due date for opening of tender happens to be a holiday, then tenders would be received & opened on the next working day at the same time.
2. Please note that the tenders against this tender enquiry are being invited **through e-tendering mode**. In case of any clarification the prospective bidders may contact this office as mentioned above.
3. **The prospective bidders are requested to get their digital signatures (Class-3) well in time** for participation in the tender and no request for extension on this account will be entertained.
4. **Manual tenders in any form/case will not be accepted.**



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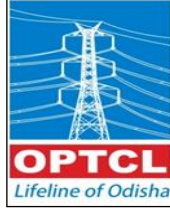
E-mail - ehtm.cle.bbs@optcl.co.in

For and on behalf of ODISHA POWER TRANSMISSION CORPORATION LTD, General Manager, EHT (O&M) Circle, Bhubaneswar invites Tenders from reputed bidders fulfilling the eligibility criteria and must possess valid PAN and GST registration certificate, for the work of “**SUPPLY OF MATERIALS / EQUIPMENT FOR SAS WORK AT 132 / 33 KV GRID SUB-STATION, KHURDA UNDER EHT (O&M) DIVISION, KHURDA**”. The interested bidders would be required to enroll themselves on the tender portal www.tenderwizard.com/OPTCL. Complete set of bidding documents shall be available at www.tenderwizard.com/OPTCL from **Dt. 01.03.2023 (14:01 Hrs) To Dt. 20.03.2023 (16:01 Hrs)** Interested bidders may visit OPTCL’s official web site <http://www.optcl.co.in> and www.tenderwizard.com/OPTCL for detail specification.

N.B:- All subsequent addendums/corrigendum to the tender shall be hosted in the OPTCL’s official web site <http://www.optcl.co.in> and www.tenderwizard.com/OPTCL **only**.

Sd/-

**GENERAL MANAGER
EHT (O&M) CIRCLE, BHUBANESWAR**



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ODISHA POWER TRANSMISSION CORPORATION LIMITED

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CIN – U40102OR2004SGC007553

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Bhubaneswar-751024

E-mail - ehtm.cle.bbs@optcl.co.in

E-TENDER NOTICE NO: 07/BBS/2022

NOTICE INVITING TENDER

For and on behalf of the ODISHA POWER TRANSMISSION CORPORATION LTD., the undersigned invites bids from the eligible bidders under **two-part bidding** system in **e-tendering mode** only as per the following details.

Tender Specification No: EHTM/CLE/GM/06/BBS/2022-23

<i>Cost of Tender Spec Document:</i>	Rs. 10,000/- + Rs.1800/- (GST@18%)= Rs. 11,800/-
<i>Earnest Money Deposit:</i>	Rs. 50,100/-
<i>Tender Processing Fee:</i>	Rs. 5,908/- (Including GST)

ESTIMATED AMOUNT: 50,06,126/- (INCLUSIVE OF GST@18%)

The bidders can view the tender documents from website free of cost. The bidders who want to submit bid shall have to pay **Rs 11,800/- (Rupees Eleven Thousand Eighty Hundred only non-refundable including GST @ 18%)** towards the tender paper cost, in the form of **Demand draft only**, drawn in favour of EHT (O&M) Circle, OPTCL, Bhubaneswar at the office of the undersigned on or before the last date & time of submission of tender.

The bidders shall have to submit non-refundable amount of Rs. 5,908/- (Rupees Five Thousand Nine Hundred Eight only) towards the tender processing fee through **e-payment** mode. Tender processing fee acknowledgement is to be submitted along with the EMD & tender cost at the office of the undersigned on or before the last date & time of submission of tender.

(NOTE: For deposit of tender processing fee to K.S.E.D.C. Ltd. Bangalore, the bidder can use various modes of e-payment facility available through Tender wizard Portal, i.e. by Credit Card, Debit Card, Net Banking)

The payment acknowledgement slip submitted along with the Bid Security Declaration Form & tender cost at the office of the undersigned on or before the last date & time of submission of tender.

The bidders shall scan the Bid Security Declaration Form, Tender Cost and tender processing fee acknowledgement and upload the same in the prescribed form in .gif or .jpg format in addition to sending the original as stated above.

The prospective bidders are advised to register their user ID, Password, company ID from website www.tenderwizard.com/OPTCL by clicking on hyper link "Register Me".

Any clarifications regarding the scope of work and technical features of the tender can be had from the undersigned during office hours.

Minimum qualification criteria of bidders: AS STIPULATED IN SECTION-II, (G.T.C.C) OF THE TENDER SPECIFICATION.

ELIGIBILITY FOR SUBMISSION OF BIDS:-

Bidders should not have any legal suit against OPTCL / GRIDCO Ltd / SLDC are only eligible for submission of Bids. Firms banned / blacklisted for business dealings by any organization are not eligible to participate in the tender. Participation in the tender by suppression of the above facts shall invite penal action, whenever detected.

The bidders must have in possession of following qualifications for participation in tender:-

- 1. Manufacturer/Authorized dealer/Supplier.**
- 2. GST Registration Certificate.**
- 3. Permanent Account Number (PAN) issued by Income Tax Department.**
- 4. Past Experience (if any) for supply of similar type of Material to Any State/Central Govt. or PSU organization within Last Three Years with 1year performance Certificate**

Sd/-
GENERAL MANAGER
EHT (O&M) CIRCLE, BHUBANESWAR

PART-I

SECTION-I

INSTRUCTIONS TO TENDERER

1. Submission of Bids: -

The bidder shall submit the bid in Electronic Mode only i.e **www.tenderwizard.com/OPTCL**. The bidder must ensure that the bids are received in the specified website of the OPTCL by the date and time indicated in the Tender notice. Bids submitted by telex/telegram will not be accepted. No request to collect the Bids in physical form will be entertained by the OPTCL.

OPTCL reserves the right to reject any bid, which is not submitted according to the instruction, stipulated above. The participants to the tender should be registered under GST act and other as applicable.

1. For all the users it is mandatory to avail the Class 3 Digital Signatures.

2. Manufacturers/ Dealers/ Bidders / Suppliers are requested to follow the below mentioned steps for Registration:

- a. Click “Register”, fill the online registration form.
- b. Pay the amount of **2,360/- (Rupees Two Thousand Three Hundred Sixty only)**.
- c. This registration is valid for two years.
- d. Send the acknowledgment copy for verification.
- e. As soon as the verification is being done the e-tender user id will be enabled.

3. After viewing Tender Notification, if bidder intends to participate in tender, he has to use his e-tendering User Id and Password which has been received after registration and acquisition of DSCs.

4. If any Bidder wants to participate in the tender he will have to follow the instructions given below:

- a. Insert the PKI (which consist of your Digital Signature Certificate – Class 3) in your System.
(Note: Make sure that necessary software of PKI is installed in your system).
- b. Click / Double Click to open the Microsoft Internet Explorer (This icon will be located on the Desktop of the computer).
- c. Go to Start > Programs > Internet Explorer.
- d. Type **www.tenderwizard.com/OPTCL** in the address bar, to access the Login Screen.
- e. Enter e-tender User Id and Password, click on “Go”.
- f. Click on “Click here to login” for selecting the Digital Signature Certificate.
 - Select the Certificate and enter DSC Password.
 - Re-enter the e-Procurement User Id Password

5. To make a request for Tender Document, Bidders will have to follow below mentioned steps.

- a) Click “Un Applied” to view / apply for new tenders.
- b) Click on Request icon for online request.
- c) Enter the required fields including details of DD for tender Processing fee.

6. After making the request Bidders will receive the Bid Documents which can be checked and downloaded by following the steps mentioned below:
 - a) Click to view the tender documents which are received by the user.
 - b) Tender document screen appears.
 - c) Click “Click here to download” to download the documents.
7. After completing all the formalities Bidders will have to submit the tender and they must take care of following instructions.
 - a) Prior to submission, verify whether all the required documents have been attached and uploaded to the particular tender or not.
 - b) Note down / take a print of bid control number once it displayed on the screen
8. Tender Opening event can be viewed online.
9. Competitors bid sheets are available in the website for all.
10. **For any e-tendering assistant contact help desk number mentioned below.**
 - **Bangalore – 080- 40482000.**
 - **Mr. Satamanyu – mob: 09937140591**

2. DIVISION OF SPECIFICATION.

The specification is mainly divided into two parts viz. Part-I & Part-II.

Part-I Consists of

- | | |
|--------------|--------------------------------------|
| SECTION-I- | INSTRUCTION TO BIDDERS. |
| SECTION-II- | GENERAL CONDITIONS OF CONTRACT |
| SECTION-III- | LIST OF ANNEXURE |
| SECTION-IV- | TECHNICAL SPECIFICATION AND DRAWING. |

Part-II Consists of

- 1) PRICEBID
- 2) TECHNO COMMERCIAL BID (excel sheet)

The Bidders are required to submit the tenders in two parts viz. Part-I (Techno commercial) & Part-II (Price bid).

3. Purchaser's Right Regarding Alteration of Quantities Tendered.

The Purchaser may alter the quantities of work at the time of placing orders. Initially the purchaser may place orders for lesser quantity with full freedom to place extension orders for further quantity under similar terms and conditions of the original orders. **Orders may also be split among more than one bidder for any particular item or division wise for the work, if considered necessary in the interest of the OPTCL.**

4. Purchaser's right to accept/reject bids:

The purchaser reserves the right to reject any or all the tenders without assigning any reasons whatsoever if it is in the interest of OPTCL, under the existing circumstances.

5. Mode of submission of Tenders.

[A] Tenders shall be submitted in electronic mode only. (www.tenderwizard.com/ OPTCL)

[B] **E-mail tenders** shall not be accepted under any circumstances.

6. Validity of the Bids: -

The bidders are requested to keep the validity of their offer for a period of **180** days from the date of opening of the tender, failing which the tenders will be rejected.

7. PRICE: -

The prices are firm F.O.R destination inclusive of freight, Insurance, Packing, Forwarding charges including of all the duties & taxes. **THE BIDDERS SHALL QUOTE THE PRICE OF THE MATERIALS AS SPECIFIED IN THE PRICE BID INCLUDING THE PRICE OF THEIR REQUIRED ACCESSORIES (For example: In case material 'A' has x, y, z accessories, then the bidder has to quote the total price as price of 'A' + price of (x+y+z)).**

8. EARNEST MONEY DEPOSIT:

The Tenders shall be accompanied by Earnest Money deposit of value specified in the notice inviting tenders. Tenders without the required EMD will be rejected outrightly.

The earnest money deposit shall be furnished in shape of **Bank Draft** to be drawn in favour of **EHT (O&M) Circle, OPTCL, and Bhubaneswar (Payable at Bhubaneswar in any nationalized bank)**

NOTE:-

- i) No adjustment towards EMD shall be permitted against any outstanding amount with the **ODISHA POWER TRANSMISSION CORPORATION LTD.**
- ii) In the case of unsuccessful bidders, the EMD will be refunded after finalization of the tender. In the case of successful bidders, this will be refunded on written request only after award of contract & on submission of security deposit in the form of BG/DD.
- iii) Suits, if any, arising out of this clause shall be filed in a Court of law to which the jurisdiction of High Court of ODISHA extends.

- iv) EMD will be forfeited if the bidder fails to accept the purchase order and/or work order issued in his favour or to execute the order, placed on them.
- v) Tenders not accompanied by Earnest Money Deposit shall be disqualified.
- vi) **In case of NSIC/MSME certificate holders 50% of EMD deposit shall be applicable and there is no discount in the cost of tender document.**
- vii) **EMD not claimed within one year of placement of order shall be forfeited.**

9. Bidders to be fully conversant with the clauses of the Specification:

Bidders are expected to be fully conversant with the meaning of all the clauses of the specification before submitting their tenders. In case of doubt regarding the meaning of any clause, the bidder may seek clarification in writing from the GM (Elect.), EHT (O&M) Circle, Bhubaneswar, This, however, does not entitle the bidder to ask for time beyond due date, fixed for receipt of tender.

10. e-Reverse Auction process shall be resorted to in the tender as follows:

A) STRATEGY FOR E-REVERSE AUCTION

- (i) Bidders are required to go through the guide lines given below and submit their acceptance to the same.
- (ii) e-Reverse Auction (RA) will be conducted in e-tender portal of OPTCL on specified date and time, while bidders shall quote from their own offices/places of their choice. Internet connectivity shall be ensured by the respective agencies/bidders themselves.
- (iii) Demonstration/ training (if not trained earlier) of bidder's nominated person(s), shall be done by KEONICS to explain all the rules related to e-Reverse Auction/ Business Rule document to be adopted.

B) Procedure for electronic Reverse Auctioning (e-RA)

- (i) The e-RA shall be conducted on www.tenderwizard.com/OPTCL only.
- (ii) Bidder has to submit letter towards agreement to the Process related Terms & Conditions for e-Reverse Auction, as per (Reverse Auction Process Compliance Form at **Annexure-IVA**). In non-receipt of the same, vendors will not be allowed to participate in e-RA.
- (iii) e-RA shall be carried out after opening of Price bids and completion of Price bid evaluation, which will be intimated only to the techno-commercially qualified bidders by OPTCL as per procedure given below.

Prior intimation/ Notice for RA invitation will be given to techno-commercially qualified bidders regarding the date & time of opening of the e-RA.

The start bid price (SBP) for e-Reverse Auction of each bidder under a particular package shall be the L1 evaluated price for the subject package including Taxes & Duties for the total scope for subject Package. Taking the above discovered L1 price as the upper limit e-RA will be conducted to determine the lowest possible price.

Reverse Auction will be conducted amongst first 50% of the technically qualified bidders arranged in order of prices from lowest to highest, as L1, L2, L3-----Ln, and L1 price will be discovered. Minimum of 3 bidders shall be eligible for e RA. (eg. If 4 bidders are financially evaluated then the L1, L2 and L3 bidders shall be eligible for e-RA). Number of bidders eligible for participating in RA would be rounded off to next higher integer value if number of technically qualified bidders is odd (e.g. if 7 bids are technically qualified, then RA will be conducted amongst L1 to L4).

However, in case only two bidders are found to be responsive, e-RA would be carried out with both the parties without any elimination. However, OPTCL reserves the right to invite the evaluated L1 bidder for negotiation without conducting the e-RA.

In case of price submitted by any bidder is found to be abnormal, OPTCL reserves the right to reject the bid of the bidder(s).

Rank of bidders would be displayed as per the total cost to OPTCL, i.e. including Taxes and Duties payable by OPTCL as per the provisions of the bidding document & after e-RA process is over.

- iv) OPTCL reserves the right to conduct e-RA and it is obligatory on part of bidder(s) invited to participate in e-RA process once they have responded to the techno-commercial bid.
- v) Names of bidders/ vendors shall not be disclosed during the e-RA process. Names of bidders/ vendors shall be anonymously masked in the e-RA process.
- In case of RA, start/ reference price and step value of decrement shall be indicated to the bidders at the start of the auction. Any participating bidder can bid one or multiple step decrement lower than the prevailing lowest bid at that time. The Bidder shall be able to view Bid Start Price, Bid Decrement Value, Prevailing Lowest Bid value, last Bid Placed by him and time left for bidding.
- The step value of decrement in a package to be offered by bidder (the minimum amount of reduction in the total bid price including all taxes & duties during auction), shall be kept at 0.15% of L1 bidder's final evaluated price (or) at approved amount as decided by OPTCL.
- Bidders can only quote any value lower than their previous quoted price. However, at no stage, increase in Price will be permissible.

- At any point during Reverse Auction, bidding price field shall remain enabled for the bidders. The total reverse auction period shall be unlimited and the initial auction period (1st slot) will be of thirty (30) minutes with provision of auto extension by ten (10) minutes from the schedule/extended closing time. If any fresh lower bid is received in last ten minutes of auction period or extended auction period, the auction shall get extended automatically for another 10 minutes. In case there is no Bid received during schedule /extended slot, the Auction shall get closed automatically without further extension.
 - However, bidders are advised not to wait till the last minute or last few seconds to enter their bid during the period of e-reverse auction to avoid complication related with internet connectivity, network problem, system crash down, power failure etc.
- vi) After conclusion of e-Reverse Auction i.e (Closing Price in Reverse Auction will be taken as offered price by the L1 bidder), decrease in price of individual head of the template shall be considered proportionately on all individual line items of the respective head of the price schedule of the successful L1 bidder.

Any bid received at the tender wizard server end subsequent to closure of the e-RA shall be summarily rejected and shall not be considered as a valid bid under whatsoever circumstances. For this purpose, tender wizard server log shall prevail.

The bidder shall not involve himself or any of his representatives in price manipulation of any kind directly or indirectly by communicating with other bidders.

During Reverse Auction, If no bid is received within the specified time, OPTCL, at its discretion, may decide to close the reverse auction process/ proceed with conventional mode of tendering [Evaluation of Part-II (price bid) submitted by bidders earlier].

- vii) Consequent upon completion of e-Reverse Auction, OPTCL's decision on award of contract shall be final and binding on the bidders.

OPTCL shall be at liberty to call the L1 bidder for further process/ negotiation and also at liberty to cancel the e-reverse auction process/ re-tender at any time, without assigning any reason thereof. OPTCL can decide to reschedule or cancel any reverse auction: the bidders shall be informed accordingly.

OPTCL/ Service Provider shall not have any liability to bidders for any interruption or delay in access to the e-Tender site/ Reverse Auction link irrespective of the cause.

11. Documents to Accompany Bids.

Bidders are required to submit tenders in the following manner:

- i) Declaration Form as per **Annexure-I** (duly signed) to be uploaded in .pdf format.
- ii) Bidder's information as per Annexure-II.
- iii) Earnest Money Deposit (scanned copy is to be uploaded)

- iv) Abstract of Terms & conditions in prescribed proforma as per **Annexure-II**. To be entered in the bid sheets provided.
- v) General Terms & Conditions of contract as per Section-II of the Specification. (All the required documents are to be uploaded.)
- vi) Data on past experience if any **as per** the Specification.(Scanned copy to be uploaded)
- vii) Proof of Manufacturer / Supplier / Authorised dealer, permanent account number [PAN], GST Registration certificate of the firm is required under Income tax Act. (Scanned copy to be uploaded).
- viii) Schedule of prices in the prescribed proforma in the price bid sheet provided in *.xls format.
- ix) Photostat copies of type test certificates of materials / equipment offered as stipulated in the Technical Specification.
- x) Any other document required, is to be uploaded.

12. Conditional Offer:

Conditional offer shall not be accepted.

12. General: -

- i) The Bidder must get him registered in tender portal by paying an amount of **Rs. 2360/- through e-payment mode only**. This registration is valid for two years.
- ii) The tender paper cost (Form fee non-refundable) for an amount of **Rs. 11,800/- is to be paid in shape of DD**.
- iii) The tender processing fee for an amount of **Rs. 5,908/- (Non-refundable)** is to be paid in e-payment mode only.
- iv) In the event of discrepancy or arithmetical error in the schedule of price, the decision of the purchaser shall be final and binding on the bidder.
- v) Notice inviting tender shall form part of this specification.
- vi) It should be distinctly understood that the price bid shall contain only details/documents relating to price, as mentioned herein above.
- vii) **The Bidder must submit the cost of tender document in shape of DD in a sealed cover envelope super scribing the Tender Notice No. & Date of opening of tender clearly on the envelope cover. The said envelope is to be submitted in the office of the purchaser/Tenderer on or before the last date and time of submission of tender.**

Sd/-
GENERAL MANAGER
EHT (O&M) CIRCLE, BHUBANESWAR

SECTION-II
GENERAL TERMS AND CONDITIONS OF CONTRACT [G.T.C.C.]

1. Scope of the contract:

This specification covers “**SUPPLY OF MATERIALS / EQUIPMENT FOR SAS WORK AT 132 / 33 KV GRID SUB-STATION, KHURDA UNDER EHT (O&M) DIVISION, KHURDA**” as per technical requirement mentioned in Section – VI of the tender specification. The scope of contract shall be to deliver the material on Rail/Road transport at destinations of OPTCL site store (132/33 KV Grid Sub-Station, Khurda) as specified in the schedule of quantity.

2. Definition of terms:

For the purpose of this specification and General Terms and Conditions of contract [GTCC], the following words shall have the meanings hereby indicated, except where otherwise described or defined.

- 2.1 “The Purchaser” shall mean the General Manager, EHT (O&M) Circle, Bhubaneswar for and on behalf of ODISHA POWER TRANSMISSION CORPORATION LTD., Bhubaneswar.
- 2.2 “The Engineer” shall mean the Engineer appointed by the Purchaser for the purpose of this contract.
- 2.3 “Purchaser’s Representative” shall mean any person or persons or consulting firm appointed and remunerated by the Purchaser to supervise, inspect, test and examine workmanship and materials of the equipment to be supplied.
- 2.4 “The supplier” shall mean the bidder whose bid has been accepted by the purchaser and shall include the bidder’s executives, administrators, successors and permitted assignees.
- 2.5 “Equipment” shall mean and include all machinery, apparatus, materials, and articles to be provided under the contract by the suppliers.
- 2.6 “Contract Price” shall mean the sum named in or calculated the bid.
- 2.7 “General Condition” shall mean these General Terms and Conditions of Contract.
- 2.8 “The Specification” shall mean both the technical as well as commercial parts of the specification annexed to or issued with GTCC and shall include the **schedules** and drawings, attached thereto as well as all samples and pattern, if any.
- 2.9 “Month” shall mean “Calendar month”.
- 2.10 “Writing” shall include any manuscript, type written, printed or other statement reproduction in any visible form and whether under seal or under hand.
- 2.11 “FOR Destination costs” shall mean the cost of equipment and material at the consignee’s store/site. The cost is inclusive of all taxes, packing, forwarding and insurance and freight charges.

- 2.12 The term “Contract document” shall mean and include GTCC, specifications, schedules, drawings, form of tender, Notice Inviting Tender, covering letter, schedule of prices or the final General Conditions, any special conditions, applicable to the particular contract.
- 2.13 Terms and conditions not herein defined shall have the same meaning as are assigned to them in the Indian Contract Act, failing that in the ODISHA General Clauses Act.

3. **Manner of execution:**

All materials supplied under the contract shall be manufactured in the manner, set out in the specification or where not set out, to the reasonable satisfaction of the Purchaser.

4. **INSPECTION & TESTING:**

Prior to painting of material & dispatch, inspection of material at your factory premises is to be carried out by OPTCL engineer appointed by the undersigned. You are requested to office for inspection after the material is ready and shall give at least 10(Teen) days advance notice intimating the actual date of inspection. Dispatch instruction will be issued after approval of inspection report. After due verification of the ACDB panel, OPTCL will issue clearance to despatch the material to site. The cost for above Inspection (which includes Transportation (AC), Fooding charges, hotel fees of double bed AC for maximum Three days) will be borne by the Firm without extra cost to OPTCL.

5. **Technical qualification:** The documents of all bidders shall be scrutinized by the CLPC committee to be constituted by the purchaser. The bidders, who qualify the technical round, shall be considered for open of Price Bid. *In no case, the bidders shall be allowed for submission of document after opening of technical bid.*

6. **Rejection of Materials.**

In the event any of the equipment’s /material supplied by the manufacturer is found defective due to faulty design, bad workmanship, bad materials used or otherwise not in conformity with the requirements of the Specification, the Purchaser shall either reject the equipment /material or ask the supplier in writing to rectify or replace the defective equipment /material free of cost to the purchaser. The Supplier on receipt of such notification shall either rectify or replace the defective equipment /material free of cost to the purchaser within 15 days from the date of issue of such notification by the purchaser.

7. **Language and measures:**

All documents pertaining to the contract including specifications, schedule, notices, correspondence, operating and maintenance instructions, drawings or any other writing shall be written in English language. The metric system of measurement shall be used exclusively in this contract.

8. **Right to reject /accept any tender:**

The purchaser reserves the right either to reject or to accept any or all tenders if the situation so warrants in the interest of the purchaser. Orders may also be split up between different Bidders on individual merits of the Bidder. The purchaser has exclusive right to alter the quantities of materials/ equipment at the time of placing final purchase order. After placing of the order, the purchaser may defer the delivery schedule of the materials. It may be clearly understood by the Bidder that the purchaser need not assign any reason for any of the above action[s].

9. Delivery:-

The desired delivery period shall be within 60 (Sixty) days of placing purchase order. The tenderer is to ensure the delivery of the assembled materials at scheduled destination within the delivery period. The detailed instruction regarding dispatch of materials will be indicated at the time of placing the order. The purchaser however reserves the right to reschedule the delivery, change of destination.

10. Dispatch instructions.

a) The equipments/ materials should be securely packed and dispatched directly to the specified site at the supplier's risk by Road Transport only after getting dispatch clearance/purchase order from the purchaser.

b) Loading & unloading of Ordered Materials.

It will be the sole responsibility of the supplier for loading and unloading of materials both at the factory site and at the destination site/store. The Purchaser shall have no responsibility on this account.

11. Supplier's Default Liability.

(I) The Purchaser may, upon written notice of default to the supplier, terminate the contract in circumstances detailed hereunder.

a) If in the judgment of the Purchaser, the supplier fails to make delivery of equipment/material within the time specified in the contract or within the period for which if extension has been granted by the Purchaser in writing in response to written request of the supplier.

b) If in the judgment of the Purchaser, the supplier fails to comply with any of the provisions of this contract.

(II) In the event, Purchaser terminates the contract in whole or in part the Purchaser reserves the right to purchase upon such terms and in such a manner as he may deem appropriate in relation to the equipment/material similar to that terminated and the supplier will be liable to the Purchaser for any additional costs for such similar equipment/material and/or for penalty for delay as defined in clause-23 of this section until such reasonable time as may be required for the final supply of equipment.

(III) In the event the Purchaser does not terminate the contract supplier shall be liable to the Purchaser for penalty for delay as set out in Clause-23 of this section until the equipment is accepted. This shall be based only on written request of the supplier and written willingness of the Purchaser.

12. Force Majeure:

The supplier shall not be liable for any penalty for delay or for failure to perform the contract for reasons of force majeure such as acts of god, acts of the public enemy, acts of Govt., Fires, floods, epidemics, Quarantine restrictions, strikes, Freight Embargo and provided that the supplier shall within Ten (10) days from the beginning of delay on such account notify the purchaser in writing of the cause of delay. The purchaser shall verify the facts and grant such extension, if facts justify.

13. Extension of time:-

If the delivery of equipment/material is delayed due to reasons beyond the control of the supplier, the supplier shall without delay give notice to the purchaser in writing of his claim for an extension of time. The purchaser on receipt of such notice may or may not agree to extend the contract delivery date as may be reasonable but without prejudice to other terms and conditions of the contract.

14. Guarantee period: -

The Material should be guaranteed for satisfactory operation and against defects in design, materials and workmanship for a period of at least 18 (Eighteen) months from the date of supply or 12(Twelve) months from the date of commissioning whichever is earlier. The above guarantee certificate shall be furnished in triplicate to the purchaser for his approval. Any defect noticed during this period should be rectified/replaced by the supplier free of cost to the purchaser provided such defects are due to faulty design, bad workmanship or bad materials used, within one month upon written notice from the purchaser failing which provision of clause 23 (ii) shall apply.

15. GSTIN CERTIFICATION, PAN CARD & MANUFACTURER / AUTHORIZED DEALERSHIP CERTIFICATE :

Attested legible Xerox copies of Income Tax PAN Card, GSTIN Certificate & manufacturer/authorized dealership certificates valid on the date of opening of the tender should be submitted along with tenders without which tender will be rejected at the time of opening. If required, the tenders shall have to produce original documents for verification any time after the opening of tender. Those who fail to produce the same and found not to be valid on the date of opening of the tender, their tenders will be rejected.

16. TEST CERTIFICATE & DRAWING: Necessary test certificate & Drawing of the product to be submitted to this after completion of inspection to this office to take necessary action at this end.

17. SUBMISSION OF PROOF REGARDING MANUFACTURER'S CERTIFICATE/AUTHORISED DEALERSHIP CERTIFICATE, PRICE LIST OF THE MANUFACTURER, PAST EXPERIENCE OF EXECUTION OF ORDER PERFORMANCE CERTIFICATE, TECHNICAL LITERATURE AND DRAWING, TYPE TEST CERTIFICATE:

Attested legible Xerox copies of necessary Manufacturer's certificate, valid authorized dealer certificate, Manufacturer's Price list and technical literature etc. should be furnished along with the tender. If required, the firms may be requested to produce such original certificates for verification. Past experience, if any, of execution of Purchase Orders need to be furnished by the bidders. The tender shall be accompanied with detail drawing and technical literature, leaflets, manuals if any.

18. FREE REPLACEMENT: Free replacement of materials lost / damaged during transit shall be made immediately on receipt of the intimation from the consignee /Paying Officer without waiting for settlement of the claim of bidders with Railway/Lorry/Insurance Company etc.

19. STANDARDS: The equipment's shall strictly comply with relevant IS (Latest edition along with amendments if any) or equivalent standard as regards material, design, manufacture and testing etc.

20. **QUANTITY VARIATION:** The quantity to be ordered may undergo revision at the time of placement of orders.
21. **B.G. / DD towards security deposit, 100% payment and performance guarantee:**
- A. i). A Composite Bank Guarantee as per the Proforma enclosed at **Annexure-IV** of the specification for 10% of the contract value valid up to two months after the guarantee period shall be deposited within 15 days (fifteen days of placement of order) shall be furnished from any nationalized / scheduled bank having a place of business at Bhubaneswar, to the office of **DGM (El.) EHT (O&M) Division, Khurda** within 15 days from the date of issue of the work order. The BG shall be executed **on non-judicial stamp paper worth of Rs.100.00 [Rupees One Hundred]** only or as per the prevalent rules, valid for a period of 14 months from the date of completion of the work for scrutiny and acceptance The B.G should be revalidated as and when intimated to you.
- ii). No interest is payable on any kind of Bank Guarantee / Security Deposit.
- iii). In case of non-fulfilment of contractual obligation, as required in the detailed work order / as per the specification the composite Bank guarantee shall be invoked.
- B. Bidders can also submit a **Demand Draft in place of BG** for 10% of the total contract value of the work order of any nationalized / scheduled bank having a place of business at Bhubaneswar, to the office of **DGM (El.) EHT (O&M) Division, Khurda** within 15 days from the date of issue of the work order towards Security Deposit and Performance guarantee. **The security amount not claimed within three years from the date of order shall forfeited.**
22. **Terms of Payment.**
- (i) 100% value of each consignment with 100% including Tax in full as applicable along with freight & Insurance charges will be paid on receipt of materials in good condition at stores/desired site and verification thereof, subject to furnishing and approval of Composite Bank Guarantee at the rate of **10 %** (Three percent) of the cost of supplied materials, as stipulated under clause-21 of this specification & on prior approval of guarantee certificate. Income tax as applicable shall be deducted from the source.
- (ii) The supplier shall furnish Composite Bank Guarantee of appropriate amount to OPTCL covering **10 %** of F.O.R. Destination cost of the purchase order well in advance (within 15 days from the date of issue of the purchase order) before dispatch of materials.
23. **PAYING OFFICER & CONSIGNEE:** DGM (Elect.), EHT (O&M) Division, Khurda & DGM (Elect.), EHT (O&M) Sub-Division, Khurda respectively.
24. **Price reduction:-**
- i). If the Contractor fails to deliver the material as stipulated under Clause No. 9 of this tender document or any extension granted thereto, the authority shall recover from the contractor price reduction for a sum of half percent (i.e. 0.5 percent) of the contract price for each calendar week or part thereof of limited to maximum of 5% of cost (exclusive of GST) of contract value.
- ii).OPTCL shall recover the price reduction schedule from the bill of the Contractor.

iii). However, if the price reduction schedule remain un-recovered the same shall be recovered from the contract performance Bank Guarantee.

(A) If the Supplier fails to replace the material within 30 days from the date of intimation of the defect, so noticed by the purchaser within the guarantee period then the penalty for sum of one half of the one percent (0.5%) of the total Purchase order amount for each calendar week of delay shall be recovered by the purchaser within the guarantee period. For this purpose, penalty date will start from the 30th day from the date of issue of letter on defectiveness of material, so supplied, by the purchaser. The total amount of penalty in this case shall not exceed 10% (TEN PERCENT) of the purchase order amount. The purchase order amount shall mean ex-works price + freight & insurance and all taxes & duties. If the defects so intimated within the guarantee period will not be rectified by the Supplier within the stipulated period then whole of the B.G. will be forfeited by the purchaser, without any intimation to the Supplier.

25. Insurance

The Supplier shall undertake insurance of stores covered by this Specification unless otherwise stated. The responsibility of delivery of the stores at destination in good condition rests with the Supplier. Any claim with the Insurance Company or transport agency arising due to loss or damage in transit has to be settled by the supplier. The Supplier shall undertake free replacement of materials damaged or lost, which will be reported by the consignee within 30 days of receipt of the materials at destination without waiting for the settlement of their claims with the carriers and underwriters.

26. Payment Due from the Supplier

All costs and damages, for which the supplier is liable to the purchaser, will be deducted by the purchaser from any money, due to the supplier, under any of the contract (s), executed with OPTCL.

27. Supplier's Responsibility.

Notwithstanding anything mentioned in the Specification or subsequent approval or acceptance by the Purchaser, the ultimate responsibility for design, manufacture, materials used and satisfactory performance shall rest with the Bidders. The Supplier(s) shall be responsible for any discrepancy noticed in the documents, submitted by them along with the bid(s)

28. JURISDICTION OF COURT: For the purpose of jurisdiction of Court in the event of any dispute shall be deemed to have entered into any Court of law at **Bhubaneswar** to which the jurisdiction of Odisha High Court extends and it is hereby expressly agreed that neither party shall be competent to bring a suit in regard to the matter covered by this order at any place outside in State of Odisha.

29. Correspondences.

- i) Any notice to the supplier under the terms of the contract shall be served by Registered Post or by hand at the Supplier's Principal Place of Business.

- ii) Any notice to the Purchaser shall be served at the Purchaser's Principal Office in the same manner.

29. Outright Rejection of Tenders

Tenders shall be outrightly rejected if the followings are not complied with:

- a) The bidder shall submit the bid in electronic mode only and shall submit the cost of tender document, EMD and Tender processing fee on or before the date and time of opening of the bid.
- b) The Tender shall not be submitted telegraphically or by FAX.
- c) The Tender shall be kept valid for a minimum period of 180 days from the date of opening of tender.
- d) The schedule of prices should be filled up fully to indicate the break-up of the prices including taxes and duties. Incomplete submission of this schedule will make the tender liable for rejection.
- e) The Bidder should quote '**FIRM**' price only and the price should be kept valid for a minimum period of 180 days from the date of opening of the tender.
- f) The tender shall not be conditional.
- g) There must not be any violation to the terms & conditions set forth and provided in the tender specification.
- h) Attested copies of PAN and GSTIN shall be submitted along with the tender.
- i) **Authorized dealership certificate** issued by the manufacturers (**In case of authorized dealer**), valid on the date of opening of the tender shall be submitted along with the tender.
- j) There must not be any deviation to the delivery schedule as specified in tender specification.
- k) All the necessary excel sheets like techno-commercial bid sheet etc. attached with the tender should be duly filled up without any empty cells.
- l) Bidders not fulfilling the qualifying criteria as mentioned in **ELIGIBILITY FOR SUBMISSION OF BIDS.**

Official Address of the Parties to the Contract

The address of the parties to the contract shall be specified:-

TENDERER: *GENERAL MANAGER (Elect)*
EHT (O&M) CIRCLE, BHUBANESWAR
AT-Grid Sub-Station, Chandaka, PO-KIIT
Bhubaneswar-751024
Email-ehm.cle.bbs@optcl.co.in

BIDDER:

Address : _____

Telephone/Mobile No: _____

E-mail id:- _____

SECTION-III
[LIST OF ANNEXURES]

The following schedules and Performa are annexed to this specification and contained in Section-III as referred to in the relevant clauses.

1	Declaration form	ANNEXURE-I
2	Bidders information	ANNEXURE-II
3	Abstract of terms and conditions to accompany Section-II of Part-I	ANNEXURE-III
4	Reverse Auction Process Compliance	ANNEXURE-IV
5	Schedule of Quantity and delivery schedule	ANNEXURE-V
6	General Technical Specification of Panel	ANNEXURE-VI
7	Circuit Diagram and related Drawings of ACDB	ANNEXURE-VII

ANNEXURE – I

DECLARATION FORM

To,

The General Manager (Elect:)
EHT (O&M) Circle, OPTCL
Bhubaneswar

Sub: - Tender Specification No-_____

Sir,

1. I Having examined the above specification together with terms & conditions referred to therein * I/We the undersigned hereby offer to supply the materials/equipments covered therein complete in all respects as per the specification and General conditions, at the rates, entered in the attached contract schedule of prices in the Tender.
2. * I / We hereby undertake to have the materials/equipments delivered within the time specified in the Tender.
3. * I / We hereby guarantee the technical particulars given in the Tender supported with necessary reports from concerned authorities.
4. * I/We certify to have submitted the bid electronically by remitting *online payment /D.D./ remitting the cost of tender, herewith and this has been acknowledged by your letter / receipt No. _____ Dated _____
5. In the event of Tender, being decided in *my/our favour, * I/We agree to furnish the Composite B.G. in the manner, acceptable to ODISHA POWER TRANSMISSION CORPORATION LTD., and for the sum as applicable to *me/us as per clause-21 of section-II of this specification within 15 days of issue of letter of intent/purchase order failing which *I/We clearly understand that the said letter of Intent/Purchase order will be liable to be withdrawn by the purchaser, and the EMD deposited by us shall be forfeited by OPTCL.

Signed this _____ day of _____ 2022

Yours faithfully

Signature of the Bidder

with seal of the company

[This form will be duly filled up & signed by the bidder before uploading of tender documents.]

* (Strikeout whichever is not applicable)

ANNEXURE-II
BIDDER'S INFORMATION

SL NO	The bidder shall furnish general information in the following format	
	NAME OF THE BIDDER	
1	Address:-	
2	City	
3	Pin Code	
4	Contact person's Name :-	
5	Telephone No. office & Residence:-	
6	FAX No:-	
7	EMAIL:-	
9	SERVICE TAX REGISTRATION NO.	
10	PAN NO.	

Place: -

Date: -

Signature of the Bidder
with seal of the company

ANNEXURE-III

**ABSTRACT OF GENERAL TERMS AND CONDITIONS OF CONTRACT
[COMMERCIAL] TO ACCOMPANY PART-I**

1(a)	Cost of Tender Document: D.D No & Date:	
1(b)	EMD D.D No & Date:	Yes/No
1(c)	Tender Processing Fee: e-payment confirmation	
2	Manufacturer's/Authorized dealer for supply experience including user's certificate furnished or not.	Yes/No
3	Delivery: - Whether agreeable to OPTCL's Delivery Schedule.	Yes/No
4	Guarantee:- Whether agreeable to OPTCL's terms.	Yes/No
5	Whether agreeable to furnish Composite B.G. in case his tender be successful	Yes/No
6.	Terms of payment:- Whether agreeable to OPTCL's terms or not	Yes/No.
7.	Nature of price:- FIRM	Yes/No
8.	Penalty:- Whether agreeable to OPTCL's terms or not	Yes/No
9.	Validity: - Whether agreeable to OPTCL's terms or not	Yes/No
10.	Whether recent type test certificates from any Government approved laboratory are furnished or not.	Yes/No
11.	Whether materials are ISI/ISO marked.	Yes/No
12.	Manufacturer's name and its trademark.	Yes/No
13.	Whether registered under GST	Yes/No
14.	Whether declaration form duly filled in furnished or not.	Yes/No.

Place: -

Date: -

Signature of the Bidder
with seal of the company

ANNEXURE-IV

Reverse Auction Process Compliance

(To be incorporated in the bid document).

(To be submitted on letter head of the bidding company with sign and stamp and along with Technical bid)

To,

The **General Manager (Elect.)**,

EHT (O&M) Circle, OPTCL, Bhubaneswar.

Sub: Agreement to the Process related Terms & Conditions for e-Reverse Auction.

Dear Sir,

This letter is to confirm that:

- The undersigned is authorized representative of the company.
- We have studied the Commercial Terms and the Business rules governing the Reverse Auction as mentioned in your tender and confirm our agreement to that.
- We also confirm that we have gone through the auction manual and have understood the functionality of the same thoroughly.
- We, hereby, confirm that we will honour the Bids placed by us during the tendering/ e- Reverse auction process as called as e-RA.
- We also confirm that we will accept our Rank / Position that will be displayed when the Bidding Time for the Online Reverse Auction is over.

With regards, Signature with Designation with company seal

ANNEXURE-V

SCHEDULE OF QUANTITY

Sl No	Name of Materials	Unit	Quantity
1	Main ACDB with Single Source, Transducer & DG facility	Nos.	1
2	AC Bay Marshalling Kiosk with Single Source	Nos.	8
3	Current Transducer for DCDB (Make : Minilec, Dual O/P)	Nos.	1
4	Current Transducer for ACDB (Make : Minilec, Dual O/P)	Nos.	1
5	Voltage Transducer for DCDB(Make : Minilec)	Nos.	1
6	Voltage Transducer for ACDB(Make : Minilec)	Nos.	1
7	Cable Tray(W = 500 MM, L=2500 MM, H = 75 MM, TH = 2 MM) for main cable trench	Nos.	105
8	Cable Tray(W = 450 MM,L=2500 MM,H = 75 MM,TH = 2 MM) for main cable trench	Nos.	220
9	Cable Tray(W = 400 MM,L=2500 MM,H = 75 MM,TH = 2 MM) for main cable trench	Nos.	45
10	Cable Tray(W = 300 MM,L=2500 MM,H = 75 MM,TH = 2 MM) for main cable trench	Nos.	8
11	Cable Tray(W = 250 MM,L=2500 MM,H = 75 MM,TH = 2 MM) for main cable trench	Nos.	159
12	Cable Tray(W = 200 MM,L=2500 MM,H = 75 MM,TH = 2 MM) for auxilliary cable trench	Nos.	96
13	Cable Tray(W = 100 MM,L=2500 MM,H = 75 MM,TH = 2 MM) for auxiliary cable trench	Nos.	96

TECHNICAL SPECIFICATION FOR ACDB

Sl. No.	Description of Material	UOM	Quantity
1	<p>ACDB Panel of size 3700*2175*900mm(16 SWG CR Sheet), Indoor type, Digital Voltmeter , Digital Ammeter, Transducer(Current Transducer Dual O/P, Voltage Transducer Dual O/P, Make-Minilec) & DG Facility Including Complete Wiring as per attached specification along with all protection scheme and shall be connection to earth mat as per drawing.</p> <p>(A)Protection system include:-</p> <p>i)1 Pole AC U/V Relay-1 No.</p> <p>ii)3 Pole INST./Difine. Time O/C Relay-1No.</p> <p>iii)1 Pole Non-Directional Inst. E/F Relay-1No.</p> <p>(B)Indication system include:-</p> <p>i)Hooter(Aux.SUPP-60-275 VAC/20-275 V DC -1No.</p> <p>ii)Facia Display(6 Window, 75-275 V DC/AC, Make-MINILEC)-1No.</p>	No	1
2	INCOMER 800A-4P, ACB Electrical operated drawout type with spring charge indication, MP release, 4NO+4 NC Aux.Contact,220V DC Shunt trip,220V DC Close Coil & 220V DC tripping Coil (Q1)	No.	1

3	INCOMER 400A-4P, ACB Electrical operated drawout type with spring charge indication, MP release, 4NO+4 NC Aux.Contact,220V DC Shunt trip,220v DC Close Coil & 220V DC tripping Coil (Q2)	No.	1
4	Clustered LED-ASSLY-240V AC-22.5MM Red(R1,R2)	Nos.	2
5	Clustered LED-ASSLY-240V AC-22.5MM Yellow (Y1,Y2)	Nos.	2
6	Clustered LED-ASSLY-240V AC-22.5MM Blue (B1,B2)	Nos.	2
7	Clustered LED-ASSLY-240V AC-22.5MM Red (ON)(1H1,2H1)	Nos.	2
8	Clustered LED-ASSLY-240V AC-22.5MM Green (OFF)(1H2,2H2)	Nos.	2
9	Clustered LED-ASSLY-240V AC-22.5MM Blue(Spring Charge) (1H5,2H5)	Nos.	2
10	Clustered LED-ASSLY-240V AC-22.5MM White(Trip CKT. Healthy) (1H6,2H6)	Nos.	2
11	Emergency Push Bottom (Red Mushroom Head) (1PB1,2PB1)	Nos.	2
12	MCCB-4P-25KA-400A-TM based with O/C & Adjustable Static/Magnetic with rotary Handle (Q4, Q10)	Nos.	2
13	MCCB-4P-25KA-250A-TM based with O/C & Adjustable Static/Magnetic with rotary Handle (Q5,Q6, Q7,Q8)	Nos.	4
14	MCCB-4P-25KA-100A-TM based with O/C & Adjustable Static/Magnetic with rotary Handle (Q21-Q32 ,Q9, Q11)	Nos.	14
15	MCB-6P-SP-10KA C Curve (1Q2-1Q4,2Q1-2Q4)	Nos.	6
16	MCB-6P-SP-10KA C Curve(1Q5-1Q6,2Q5-2Q6)	Nos.	4
17	Aux.contactor-2NO+2NC-220V AC coil (K1,K2)	Nos.	6
18	Aux. contact block 2NO+2NC (K1,K2)	Nos.	6
19	220V DC Shunt trip(Q1,Q2)	Nos.	2
20	Rotary Switch 6A-1P-2W-ACDC(AMSW1-2)	Nos.	2
21	TNC SW-10A	Nos.	2
22	Control Terminals-10A (KUT 2.5) (1X1)	Nos.	10
23	Bulb holder (DL)	Nos.	2
24	Door Switch (DS)	Nos.	2
25	Space heater-100W-220 AC (SH)	Nos.	2
26	10A DP-DC MCB(Control wiring)	Nos.	2
27	10A DP-AC MCB(U/V Coil wiring)	Nos.	2
28	Thermostart -30-85-C-220V AC (TS)	Nos.	2

GENERAL TECHNICAL SPECIFICATION OF ACDB PANEL

- 1 (a) Type of panel Non-Draw out Type
Compartmentalised Structure
Construction Single Front Indoor
- (b) Type of Mounting Floor Mounting
- 2 Base Channel 75*40*6 MM. M.S CHANNEL
- 3 Cable Entry Bottom (Incoming/Outgoing)
- 4 Thickness of Sheet Steel (a) Load Bearing Member-2.0 mm(CRCA)
(b) Non Load Bearing Member-2.0 mm(CRCA)
(c) Gland Plate-3.0 mm(CRCA)
- 5 Busbars Al. Busbar Size-P-80*10 Sq.mm. N-40*10 sq.mm.
- 6 Earth Busbar Size Copper Size-30*6 Sq.mm.
- 7 Control Wiring with Flexible Heat Resistance Copper Conductor PVC Insulated Wire 1.1 KV grade
(a) AC Voltage Circuit 1.5 Sq.mm. (Red, Yellow, Blue, Black)
(b) AC Current Circuit 1.5 Sq.mm. (Red, Yellow, Blue, Black)
(c) Earthing 1.5 Sq.mm. (Grey)
(d) DC Control Circuit 1.5 Sq.mm. (Grey)
(e) AC Control Circuit 1.5 Sq.mm. (Black)
- 8 Control Wiring with Flexible Heat Resistance Copper Conductor PVC Insulated Wire 1.1 KV grade
(a) Up to 10A 2.5 Sq.mm.(Copper)
(a) Up to 25A 4.0 Sq.mm.(Copper)
(a) Up to 32A 6.0 Sq.mm.(Copper)
(a) Up to 40A 10 Sq.mm.(Copper)
(a) Up to 63A 16 Sq.mm.(Copper)
(a) Up to 100A 35 Sq.mm.(Copper)
- 9 PVC Tag Ferrules 2.5 Sq.mm. PVC with Nos.
- 10 Enclosure Protection IP-55
- 11 Test Voltage
(a) Insulation Test 660V/1100V DC for Power & Control
(b) High Voltage Test 2.5KV for 60 Seconds
- 12 Gasket Type Neoprene Gasket
- 13 Red, Yellow, Blue & Black Heat Shrinkable Sleeves shall be used for Busbar
- 14 Panel shall Generally conform to IS 8623 & IEC
- 15 All Metallic cases of Doors will be Earthing with 4.0 Sq.mm Green Flexible Copper Wire
- 16 Paint Shade Smoke Grey(IS 5-692)
- 17 Cable Alley Shall be Hinge Type
- 18 Type of Name plate & Name Tag Engraved with white Letters no Black Surface
- 19 Switch Board Shall be Expandable at both ends in future

TECHNICAL SPECIFICATION FOR BMK

SI No	Description of Material	Make	Unit	Qty
1	Bay Marshalling kiosk made out of 2 mm Galvanised sheet (where front Panel & loading bearing / equipment mounting panel should be of 3 mm GI sheet) of size 1525 mm X 1100 mm X 550 mm fixed on 75 mm GI base channel, with slanting roof (3 mm steel plate / zinc plate / aluminium) to both sides of size more than the top area, including the cost of required fabrication and welding etc. having double door on front and rear side and shall be lockable, with provision for connecting to earth mat with suitable rubber gasket for damp, dust and vermin proof as per attached drawing and specification .		Nos.	1
	Supply and fitting of the following in the above BMK			
2	63 Amp 4 pole MCCB, 25 kA with thermal magnetic release,	L& T /Siemens/ Any reputed make	Nos.	1
3	32 Amp 4 pole MCB	L& T /Siemens/ Any reputed make	Nos.	4
4	10 Amp 4 pole MCB	L& T /Siemens/ Any reputed make	Nos.	11
5	16 Amp 2 pole MCB	L& T /Siemens/ Any reputed make	Nos.	4
6	Copper bus bar (50 x 10 x 300 mm length)		Nos.	4
7	TB for 4 sq. mm. wire incomer (Stud type)	Elmex/ connect well	Nos.	80
8	TB for 2.5 sq. mm. wire (Stud type)	Elmex/ connect well	Nos.	90
9	MCB mounting channel		Mtr.	5
10	TB mounting channel		Mtr.	4
11	Copper earth flat (25 x 10 mm)		Nos.	1
12	6 sq. mm. copper flexible wire	Any reputed make	Mtr.	5
13	4 sq. mm. wire for internal wiring	Any reputed make	Mtr.	35

TECHNICAL SPECIFICATION FOR PERFORATED CABLE TRAY AND ACCESSORIES

1. **Material** : Aluminium / Aluminium Alloys 19000 tempering H2 material
2. **Perforated Cable Tray**
 - Sizes: **For main cable trench**
 - 500mm (Width) x 75mm (height of both side) x 2mm (Thickness) x 2500mm (Length)
 - 450mm (Width) x 75mm (height of both side) x 2mm (Thickness) x 2500mm (Length)
 - 400mm (Width) x 75mm (height of both side) x 2mm (Thickness) x 2500mm (Length)
 - 300mm (Width) x 75mm (height of both side) x 2mm (Thickness) x 2500mm (Length)
 - 250mm (Width) x 75mm (height of both side) x 2mm (Thickness) x 2500mm (Length)
 - For auxiliary cable trench**
 - 200mm (Width) x 75mm (height of both side) x 2mm (Thickness) x 2500mm (Length)
 - 100mm (Width) x 75mm (height of both side) x 2mm (Thickness) x 2500mm (Length)
3. **Cable Tray Coupler (Plate Type) with four holes and four slots for fastening.**
4. **Perforated type 90° Horizontal Tee Section**
5. **Perforated type 90° Horizontal Bend**
6. **Perforated type Central Reducer**
7. **Surface Finish:** Well fabricated with good quality dry type black color powder coating. The perforations and the ends of the cable trays and including accessories should not have any burrs and ragged edges and be of smooth surface finish.
8. **IS Standards:**
9. The cable tray including bends and tees should conform to **IS 737: 1986** for wrought aluminum and aluminum alloy sheet and strip for general engineering purposes and
10. The Nuts and bolts along with the washers should conform to **IS 1363:1967** (Specification for Hex bolts), **IS 1367: 1961** (Specification of fasteners) and **IS 2629: 1985** (Recommended Practice of Hot-Dip Galvanizing of Iron and Steel)
11. **Tests** : The material shall confirm to the following tests
 - a) Chemical composition test as per IS 2062 (2006) Grade A
 - b) Mechanical / Bending test as per IS 2062
 - c) Galvanizing test as per I.S. 6745, 2629, 2633, 4759.
 - i. Uniformity of Zinc
 - ii. Adhesion test
 - iii. Mass of zinc
 - iv. Thickness of Zinc