

**CHHATTISGARH STATE POWER TRANSMISSION CO. LTD.**

(A Govt. of Chhattisgarh undertaking) (A successor company of CSEB)

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**OFFICE OF CHIEF ENGINEER(STORE & PURCHASE)**  
**3<sup>rd</sup> Floor, SLDC Building, CSPTCL, Dangania, Raipur(C.G.)-492013**  
Phone: 0771- 2574240/36, 2574106 Fax: 0771- 2574246  
Website- [www.cspc.co.in](http://www.cspc.co.in), email- [nk.bisen@cspc.co.in](mailto:nk.bisen@cspc.co.in)

**TENDER SPECIFICATIONS**  
**TR-20/S&P/54**  
**SUPPLY OF**  
**33 KV CONTROL & RELAY PANEL FOR**  
**TRANSFORMER & FEEDER**  
**(THROUGH E-BIDDING)**  
**RFX No.-8100020990**

**LAST DATE & TIME OF SUBMISSION OF TENDER**

**23.04.2021 (TIME 15:00 HRS.)**

**DUE DATE & TIME OF OPENING OF TENDER**

**23.04.2021 (TIME 15:30 HRS.)**

**Cost of Tender:-** i) Rs.2240 (Incl 12% GST)  
(if purchased from O/o CE(S&P))  
ii) Rs.2360 (Incl 18% GST)  
(If downloaded from website)

**// SAVE ELECTRICITY, SAVE EARTH //**

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**TENDER FORM****CHHATTISGARH STATE POWER TRANSMISSION CO. LTD**

Tender document SL.No.....

ISSUED to M/s -----

Cost of Tender documents Rs.....

Received vide D.D.No.....Dtd.....

Name of Bank -----

**Signature & Seal of Issuing Authority****CHHATTISGARH STATE POWER TRANSMISSION CO LTD****RAIPUR C.G. (INDIA)****TENDER FORM**

The undersigned hereby tender and offer (subject to CSPTCL's conditions of tendering), the Chhattisgarh State Power Transmission Co. Ltd. to test and supply, plant, machinery, materials, deliver and execute and do the several works and things which are described or referred to in the enclosures & Annexures to the specification **TR-20/S&P/54** copies of which are annexed hereto and which under the terms thereof are to be supplied, executed and done by the contractor in a thoroughly good and workman like manner, and to perform and observe the provisions and agreements or the part of the contract contained in or reasonably to be inferred from the said tender documents for the sum and at the rates set out in schedules annexed hereto.

It is confirmed that:

- (i) Questionnaire for Commercial terms and conditions.
- (ii) Questionnaire for Technical specifications of the Equipments, and
- (iii) All other conditions wherever described in the tender documents have been replied in full giving clear details. It has been noted that in case any reply is not given or any reply is incomplete / ambiguous the CSPTCL will have right to take the same to be advantageous for the CSPTCL. CSPTCL's decision in this regard will be final. The bidder will have no right to furnish any technical or commercial clarification after opening of the bid which may in any way alter the offered prices.

Dated, this ..... day of .....

**Bidder's Signature****Bidder's Address**



## CHHATISGARH STATE POWER TRANS. CO. LTD.

(A Govt. of Chhattisgarh undertaking) (A successor company of CSEB)

CIN- U40108CT2003SGCO15820/ GSTIN-22AADCC5773E1ZX

**O/o Chief Engineer (Store & Purchase)**

**3<sup>rd</sup> Floor, SLDC Building, CSPTCL, Dangania, Raipur (C.G.) - 492013**

Website- [www.cspc.co.in](http://www.cspc.co.in),

Phone-0771-2574240/36/4106

Email id :-nk.bisen@cspc.co.in

Fax-0771-2574246

No.02-16/CE/ TR-20/S&P/54/3335

Raipur, Dtd 31.03.2021

### E-Procurement Tender Notice

Sealed tenders are invited from **experienced manufacturers** for supplying the following equipments/ material.

Sl. No.	Tender No.	Particulars	Qty (In Nos)	Cost of tender document including GST (Rs. )		EMD (Rs.)	Due date & Timing of Opening of tender
				Printed Tender Form	E-Tender Form Online (downloaded from website)		
1	TR-20/S&P/54 RFx No.- 8100020990	Procurement of 33KV Control & Relay Panel for Transformer	47	2240/-	2360/-	2,61,000/-	23.04.2021
		Procurement of 33KV Control & Relay Panel for Feeder	97				

- NOTE:- i) In case any of the above dates is declared as holiday then the particular date will automatically get shifted to next working day.
- ii) The quantities mentioned above are tentative & may vary according to final requirement.
- iii) **Any notice for extension of due date of tender opening shall not be published in newspapers. It will be displayed only on official website of the company.**
- iv) The tender will be processed through e-bidding module of SAP-SRM. Bidders are advised to visit our website [www.cspc.co.in/cspc](http://www.cspc.co.in/cspc) for viewing detailed instructions regarding submission of offer through SAP-SRM.
- v) **The NIT shall also be published in [www.tarang.website](http://www.tarang.website)**

### // TERMS AND CONDITIONS //

- (i) The tender documents can be obtained from the office of the CE (S&P) in person on payment of cost of tender documents in the form of DD only made out in the name of Manager (RAO: HQ), CSPTCL, Raipur accompanied with firm's application on its letter head. If tender document is required by post, Rs.250/- is to be paid by DD additionally along with the cost of documents. If more than one tender document is required, separate DDs should be furnished for each tender. CSPTCL shall not be responsible for any postal delay in receipt/ non-receipt of tender documents. No receipt of tender shall be issued in any case.

- (ii) The tender document can also be downloaded from official website of CSPTCL 'www.cspc.co.in' (go through Chhattisgarh State Power Transmission Co. Ltd.- Tender Notice/ Store & Purchased Offices) and required tender fee in form of DD in favour of Manager (RAO:HQ), CSPTCL, Raipur payable at Raipur should be submitted along with EMD in envelope containing DD of EMD. The envelope containing DDs of cost of tender document and EMD should be suitably super scribed "DDs containing cost of tender document and EMD". The details of DDs be mentioned on the outer side of the envelope also. Please note carefully in absence of aforesaid requisite tender fee, further bids shall not be considered for opening.
- (iii) Tender document and the details specification can be obtained on any working day one day prior to the due date. The tenders duly filled in shall be dropped/ get dropped in the specified tender box up to 15.00 Hrs on the due date. Any other means of delivery shall not be accepted. No receipt of tender shall be issued in any case. The tender box shall be locked/ sealed at 15.00 Hrs on the due date and shall be opened at 15.30 Hrs on the same date.
- (iv) After publication of NIT & before the date of opening of TC bid, corrigendum/ other information (if any) shall be displayed on our official web only. The bidders are requested to remain in contact with this office or visit our web-site for any development/ clarification/ amendment issued subsequently.
- (v) CSPTCL reserves the right to accept or reject any or all the offers, in part or full without assigning any reason whatsoever.

Website [www.cspc.co.in](http://www.cspc.co.in)  
(Go through CSPTCL-Tender notice)

**Chief Engineer (S&P)**  
**CSPTrans.CL : Raipur**

## Special Instructions to bidders for submission of bid through SAP- SRM module (E-bidding)

The tender specification no. **TR-20/S&P/54** is to be processed through e-bidding. The bid is to be submitted online as well as offline (hard copy). Details of NIT & Tender Documents are available on our website—<http://www.cspc.co.in> & <http://ebidding.cspcl.co.in:50724/irj/portal>. The bidder may download the same from the above site. In e-bidding portal, tender documents will be displayed in online tender display at Technical RFx section.

Last date & time of submission of bid in hard copy and also in softcopy is dtd 23.04.2021 upto 3.00 pm and due date & time of opening of part –I and part-II of the tender is dtd 23.04.2021 at 3.30 pm.

### Important Instructions :-

1. Please note that this tender shall be processed online as well as offline. The bidder has to submit all the documents in hard copy as per tender specifications in three envelopes. Besides above, scanned copy of following documents are to be uploaded in e-bidding portal:-
  - (a) The scanned copy of DD for tender fee.
  - (b) The scanned copy of DD for EMD/ EMD exemption.
  - (c) Schedule V commercial information.
  - (d) Schedule VI (A) Schedule for commercial deviation.
  - (e) Schedule VI (B) Schedule for Technical deviation.It may please be noted that only above mentioned documents are to be uploaded in e-bidding portal and no other document is required to be submitted in e-bidding portal. The bidder shall give reply to following questions regarding above documents in e-bidding portal:-
  - (i) Whether scanned copy of tender fee DD uploaded. Yes/No
  - (ii) Whether scanned copy of DD of EMD /EMD Exemption uploaded. Yes/No
  - (iii) Whether scanned copy of Schedules of Commercial information Yes/No
  - (iv) Whether scanned copy of Schedules of Commercial deviation Yes/No
  - (v) Whether scanned copy of Schedules of Technical deviation Yes/No
2. It is not required to upload /attach scanned copy of price bid in Soft/ Hard copy. **Only the rates are to be filled in the item tab in e-bid in SAP SRM System (online e-tender)**. Rates should be quoted online & in specified fields only. Once the rates are filled, the bidders may change their rates up to the due date and time of submission of tender. After due date and time, no change on any ground whatsoever will be accepted.
3. After scrutiny of techno-commercial bid, the price bid will be opened in e-bidding system only of eligible bidders for which suitable intimation will be given to the bidders offline & through email.
4. Please note that e-mail is always system generated, hence bidders are advised to regularly check their inbox/junk mail box.
5. CSPTCL shall not assume any responsibility for non-supporting of system, internet, line & associated hardware & software for bidding their tender. No extension in time shall be granted on such grounds. The bidder should submit their bid well before submission dead line to avoid any system related problem. It is strongly recommended not to wait for submission of bid in last minutes as internet/technical problem may disrupt their works.
6. Reference time for submission dead line shall be the time displayed in the portal and shall be treated as final.

7. After end of submission dead line, no alteration in the tender will be allowed by the system. However, in case of extension of due date of opening of tender, the bidders will be allowed to submit revised bid in the system.
8. CSPTCL will not accept incomplete bid.
9. The bidder must have a valid Digital Signature & SAP SRM User ID. User ID & Password from CSPTCL and Digital Signing Certificate and Digital Encryption Certificate from any recognized digital signature issuing authority are required for participation in any Tender. The bidder shall intimate in advance regarding details of digital signature issuing authority for ensuring the reliability of the same. For User ID and Password for participating in the tender, the bidder shall register on line through e-bidding portal.
10. **The e-bidding vendor user manual displayed on website-<http://ebidding.cspcl.co.in:50700/irj/portal> for the help of the bidders. For any further queries the bidder may contact at Helpline no. 0771-2576672/73 (EITC, CSPDCL, Raipur)**
11. The training for bidders will be on every Wednesday from 3.00 pm to 5.00 pm at office premises of Energy Info Tech Center (EITC) at Dangania, Raipur.
12. Tender shall be opened in the scheduled time as notified. If the due date of opening/submission of tender documents is declared a holiday by the Govt. or local administration, it will be automatically shifted to next working day for which no prior intimation shall be given. Tender opening shall be continued on subsequent days, in case the opening of all tenders is not completed on due date because of the technical constraints of system on the day of opening. It may be noted that the due date of opening/time may be altered/ extended if desired by CSPTCL without assigning any reason. However, intimation shall be available on company's tender portal/bidders email (if participation shown). The bidders are requested to keep track of the same.
13. Amendment in tender specification will be published on our website as well as in SRM system and the intimation regarding amendment in date extension will be conveyed through system generated e-mail to registered bidders only.
14. Before participating the bidder shall carefully read all the instructions and processes.
15. Tender duly completed in all respects will be accepted online up to due date & time and will be opened on the due date at specified time in the presence of tenderers or their authorized representatives. In case of authorized representative(s) they shall bring the original authorization letter with their signature attested by the tenderer.

**Chief Engineer (S&P)  
CSPTCL: RAIPUR**

## SECTION-I

### INSTRUCTIONS TO BIDDERS

**IMPORTANT:** Except as otherwise provided in any subsequent modification/LOI/Order, the provision of this Section shall have effect notwithstanding anything inconsistent therewith contained in any other Schedule/ Annexure/ Clause/ Terms/ Condition of this tender document)

**e-Bidding & Due date:** Please note that the Tender shall be processed through e-Bidding. Instruction to Bidders for submission of Bids through SAP-SRM Module (e-Bidding) are detailed in **Instructions to bidders for submission of bid through SAP- SRM module (e-bidding)**

1. The bidders are requested to go through these instructions carefully and submit the tender in e -Bidding portal and also in hard copy accordingly.

Date of submission of tender is 23.04.2021 **upto 3:00 PM** and tender will be opened on same day at 3.30 PM in the Office of CE (S&P), CSPTCL, Danganiya, Raipur, through E-bidding as per the guidelines .

The Chhattisgarh State Power Transmission Company Ltd., Raipur (or any authority designated) - hereinafter called 'OWNER' or 'CSPTCL' or 'Company' - will receive bids as per the accompanying specification. All bids shall be prepared and submitted in accordance with instructions, terms and conditions stipulated in the tender.

2. **Tender Fee:** - The tender document can also be downloaded from official website of the CSPTCL ([www.cspc.co.in/csptcl](http://www.cspc.co.in/csptcl)). In case bidder chooses to submit his offer on downloaded tender document, they will be required to deposit specified tender fee (cost of tender documents- non refundable) in form of DD in favour of Manager (RAO:HQ), CSPTCL, Raipur payable at Raipur. The bank draft shall be issued from the nationalized/ scheduled bank. **DD should be enclosed with the part I of the tender offer. In absence of tender fee, offer will not be considered for opening of price bid.**
3. **Earnest Money:-** The earnest Money in the instant tender is **Rs 2,61,000/-** (Rs Two Lakh Sixty One Thousand Only) payable in the form of demand draft in favour of Manager (RAO : HQ), CSPTCL, Raipur.

The bidding is open to manufacturers only who can provide satisfactory evidence to substantiate this.

**Goods & Service Tax:-The bidder should furnish valid GST registration number and certificate along with EMD. In absence of GST registration the offer shall not be accepted.**

4. The bidding is open to manufacturers only who can provide satisfactory evidence to substantiate this.
5. **Pre-Qualifying Requirements:** The pre qualifying requirements proposed to be incorporated are as mentioned here under:

S.N	Proposed PQR for the Instant Tender	Document to be submitted by Bidder in support of PQR
(A)	<b>Technical &amp; Supply Experience Requirement :-</b>	
(i)	<b>For Regular Supplier:-</b>	
1.1	The Bidder should be a manufacturer of 33KV or above voltage class Control & Relay Panel having manufacturing unit in India .	In support of bidder being manufacturer of tendered material/equipment offered self attested valid NSIC/DIC(DIC is applicable for CG state SSI unit) certificate should be submitted. In case firm is not registered with NSIC/DIC, self attested copy of valid factory license issued by industries department of



		State/Central Government for tendered item/items should be submitted.
1.2	<p>The Bidder should have a minimum experience of at least five (5) years of manufacture and supply of 33 KV or above voltage class Control &amp; Relay Panel to following Indian Entities as on date of issue of NIT:-</p> <p>i) Power utilities owned and controlled by Central or State Govt, Or</p> <p>ii) PSUs, Or</p> <p>iii) Govt. organizations</p> <p>directly or through turnkey contractors.</p>	<p>(A) Direct supply to utility:-</p> <p>i) In support of Bidder having minimum experience of at least five (5) years of manufacturing and supply of 33KV or higher voltage class Control &amp; Relay Panels, copies of purchase orders (in the name of manufacturer) and relevant MRCs (Material Receipt Certificate) issued by the entities mentioned in clause(i)1.2 will be submitted. The date of receipt mentioned in the MRC will be treated as actual date of supply.</p> <p>ii) The supply experience as on date of issue of NIT will be counted from the aforesaid actual date of supply. In case of non-availability of MRC, commissioning certificate / Performance certificate may also be treated as proof of actual supply provided it establishes the requirements as per PQR and is issued by an officer not below the rank of Executive Engineer/Manager of the entities in clause (i)1.2 of PQR.</p> <p>iii) If performance certificate indicates both proof of supply experience of five (5) years or more and satisfactory performance for three (3) years or more [as per clause (i) 1.3], separate MRC will not be required as a proof of supply. However, if only MRC is submitted as proof of supply , performance certificate will have to be submitted separately to establish minimum performance of three (3) years as per PQR. All these documents should be attested by the authorized signatory of the tender.</p> <p>Through Turnkey contractors:-</p> <p>i) Self attested Copies of order issued by the entities mentioned in clause (i) 1.2 of PQR to the turnkey contractor (Order should be in the name of the turnkey contractor).</p> <p>ii) Self attested Copies of order issued by the turnkey contractor(s) to the manufacturer (bidder).</p> <p>iii) Self attested Copies of inspection letter and dispatch clearance issued by the entities mentioned in clause (i) 1.2 of PQR to the manufacturer (bidder).</p> <p>iv) Self attested Copies of invoice issued by the turnkey contractor to the entities mentioned in clause (i) 1.2 of PQR.</p> <p>v) Self attested Copies of performance certificate issued by the entities mentioned in clause (i) 1.2 of PQR towards proof of execution of order placed by the turnkey contractor to the manufacturer(bidder) and successful performance of minimum three (3) years[as per clause (i) 1.3].</p>

1.3	The 33 KV or above voltage class Control & Relay Panel should be in successful operation for minimum 3 years from date of commissioning as on date of issue of NIT in the aforesaid entities mentioned in clause 1.2.	In support of satisfactory performance , a self attested copy of performance certificate in support of minimum three (3) years successful performance issued by the entities mentioned in clause (i) 1.2 of the PQR will have to be submitted.
1.4	<p>The bidder should have all type test reports of the offered relays i.e Directional and Non directional overcurrent and earthfault relay, , Overload relay &amp; REF relay etc conducted as per relevant standards i.e. ISS/ IEC carried out at &amp; issued by Govt. Standard laboratory/ NABL accredited laboratory /ILAC accredited Laboratories . The type test report should not be older than Seven (7) years as on the date of issue of NIT. The makes &amp; models of relay proposed to be offered by the bidder should be mentioned in the TC Bid and type test report of these offered makes &amp; models will only be accepted.</p> <p>Further, copy of test for degree of protection IP54 on the panels conducted in any Govt. Standard laboratory/ NABL accredited laboratory /ILAC accredited Laboratories conducted within Seven (7) years as on date of issue of NIT should also be submitted.</p> <p>The type test reports, which could not be re-validated due to lock down since 23/03/2020, shall be treated as valid upto 30/09/2021 as per CEA's circular no. CEA-PS-80/1/2019-PSETD Division Part (2)/564-640.</p>	The bidder should submit self attested copies of all type test reports required as per clause (i) 1.4 .
(ii)	<b>For C.G.state SSI units:-</b>	
1.1	Chhattisgarh state based Micro and small Enterprises (hereinafter referred as CG State SSI Units) should be registered under Micro, Small and Medium Enterprises Development Act,2006 for manufacturing tendered item.	In support of manufacturing & technical requirement a copy of registration under MSME act 2006 for tendered item & BIS license for tendered items, duly self attested to be submitted.
1.2	The bidder should have all type test reports of the offered relays i.e Directional and Non directional overcurrent and earthfault relay, , Overload relay & REF relay etc conducted as per relevant standards i.e. ISS/ IEC carried out at & issued by Govt. Standard laboratory/ NABL accredited laboratory /ILAC accredited Laboratories . The type test report should not be older than Seven (7) years as on the date of issue of NIT. The makes & models of relay proposed to be offered by the bidder should be mentioned in the	The bidder should submit self attested copies of all type test reports required as per clause (ii) 1.2.

	<p>TC Bid and type test report of these offered makes &amp; models will only be accepted.</p> <p>Further, copy of test for degree of protection IP54 on the panels conducted in any Govt. Standard laboratory/ NABL accredited laboratory /ILAC accredited Laboratories conducted within Seven (7) years as on date of issue of NIT should also be submitted.</p> <p>The type test reports, which could not be re-validated due to lock down since 23/03/2020, shall be treated as valid upto 30/09/2021 as per CEA vide circular no. CEA-PS-80/1/2019-PSETD Division Part (2)/564-640.</p>	
(B)	<b>Commercial/Financial Requirement:-</b>	
(i)	<b>For Regular Suppliers:-</b>	
1.1	<p>The bidder should have Minimum Average Annual Turn Over (MAAT) for best three financial years out of last five financial years i.e. 2015-16, 2016-17, 2017-2018 , 2018-2019 &amp; 2019-20 of Rs. <b>4.00 Cr.</b> (Rs. Four Crore only).</p> <p>In case bidder is a holding company, MAAT shall be that of holding company only (i.e. excluding its subsidiary / group companies). In case bidder is a subsidiary of a holding company, the MAAT shall be of subsidiary company only (excluding its holding company).</p>	Statement of annual turnover (as per annexure of the tender), audited balance sheets and profit & loss statement duly certified by Chartered Accountant. The audited balance sheets furnished should be for last five financial years (i.e. F.Y 2015-16 , 2016-17 , 2017-2018, 2018-2019 & 2019-20).
1.2	<p>Net worth of bidder for last three financial years i.e .2017-2018,2018-2019 &amp; 2019-20 should be positive.</p> <p>Net worth means the sum total of paid-up capital and free reserves (excluding reserves created out of revaluation) reduced by aggregate value of accumulated losses (including debit balance in profit and loss account for current year) and intangible assets.</p>	A statement showing 'Net worth' including assets and liability of the bidder duly certified by chartered accountant for the last three financial years (i.e F.Y. 2017-2018 , 2018-2019 & 2019-20) along with audited balance sheet of these three years shall be furnished.
1.3	<p>The bidder shall submit Certificates (in original) from CA stating that,</p> <p>a. All payment obligations (principal/interest) on outstanding debentures have been discharged and no such payment as on 31.12.2020 is outstanding /overdue.</p> <p>b. The Bidder is presently not in default in payment of any bank loan or interest thereon for more than three months or any loan account of the bidder has not been classified as NPA (Non performing assets) by the creditor/ leading bank as on date of issue of NIT.</p>	Original Certificates issued by CA as per clause (i) 1.3.

(ii)	<b>For C.G. State SSI units:-</b>	
1.1	<p>CG state SSI units should have the aggregate turnover of minimum Rs. <b>17 Lakhs</b> (Rs. Seventeen Lakhs only) for best three financial years out of last five financial years i.e. 2015-16, 2016-17, 2017-2018, 2018-2019 &amp; 2019-20.</p> <p>In case bidder is a holding company, MAAT shall be that of holding company only (i.e.excluding its subsidiary / group companies). In case bidder is a subsidiary of a holding company, the MAAT shall be of subsidiary company only (excluding its holding company).</p>	Statement of annual turnover (as per annexure of the tender), audited balance sheets and profit & loss statement duly certified by Chartered Accountant. The audited balance sheets furnished should be for last five financial years (i.e. F.Y 2015-16, 2016-17, 2017-2018, 2018-2019 & 2019-20).
1.2	<p>Net worth of bidder for last three financial years i.e . FY 2017-2018, FY 2018-2019 &amp; FY 2019-20 should be positive.</p> <p>Net worth means the sum total of paid-up capital and free reserves (excluding reserves created out of revaluation) reduced by aggregate value of accumulated losses (including debit balance in profit and loss account for current year) and intangible assets.</p>	A statement showing 'Net worth' including assets and liability of the bidder duly certified by chartered accountant for the last three financial years (i.e F.Y. 2017-2018, 2018-2019 & 2019-20) shall be furnished.
1.3	<p>The bidder shall submit Certificates (in original) from CA stating that,</p> <p>a. All payment obligations (principal/interest) on outstanding debentures have been discharged and no such payment as on 31.12.2020 is outstanding /overdue.</p> <p>b. The Bidder is presently not in default in payment of any bank loan or interest thereon for more than three months or any loan account of the bidder has not been classified as NPA (Non performing assets) by the creditor/ leading bank as on date of issue of NIT.</p>	Original Certificates issued by CA as per clause (ii) 1.3.
(C)	<b>Other Requirements:-</b>	
1.1	<p>The bidder should not be debarred/black-listed by Bank / State Govt. / Central Govt./ State PSU/CPSU/SEB/Public utility as on the date of issue of NIT. However, the bid may not be considered for further processing in following cases also:-</p> <p>a. If, bidder is debarred/black-listed by Bank / State Govt. / Central Govt./ State PSU/CPSU/SEB/Public utility up to date of opening of price bid of the instant tender.</p>	A declaration in this regard shall be furnished by the bidder.

	b. If a case comes to notice regarding submission of forged/fake document in any other tender under process in CSPTCL up to date of opening of price bid of the instant tender.	
1.2	“Any sums of money due to CSPTCL on the date of opening of tender should have been paid/settled in full prior to the date of opening of tender. Price bids of bidders not complying with the requirement shall not be opened.”	A declaration in this regard shall be furnished by the bidder.
1.3	The bidder shall have to submit pre-contract integrity pact in the format enclosed as Annexure-IV on non-judicial stamp paper worth Rs.300/- duly signed by the bidder along with the Techno-Commercial bid. The validity of this integrity pact shall be from the date of its signing and extended up to 02 years or the complete execution of the order to the satisfaction of both the Buyer and the Bidder/Seller, whichever is later. In case Bidder is unsuccessful, this Integrity Pact shall expire after six months from the date of its signing.	The bidder shall have to submit pre-contract integrity pact in the format enclosed as per Annexure-IV.
1.4	All the documents/ statements/ attachments/ information submitted by the bidder in proof of the qualifying requirements must be authentic / genuine’/ correct and in case, any of the said documents/statement/ attachments/ information are found to be false / fake / misleading the bidder will be disqualified and action will be taken against the bidder a’s per relevant provisions of the tender.	A declaration in this regard shall be furnished by the bidder.

6. **Only FIRM rate is** to be quoted. No price variation shall be admissible. It is not required to upload /attach scanned copy of price in soft/hard copy. Only the rates are to be filled in the item tab in e-bid in SAP SRM System (online e- bidding portal). The prices should be quoted through SAP SRM system should indicating unit ex-works price inclusive of packing & forwarding charges, GST, freight charges & any other charges should be quoted separately. The freight shall be on FIRM basis irrespective of whether the ex-works prices are firm or variable. The total F.O.R. destination price should be quoted in the relevant column.
7. It will be presumed that the bidder has taken utmost care while quoting ex-works unit rates and tax rates in the price bid, which shall be considered as base for computation of total prices. However, in case of any arithmetical mistakes/errors in calculation for arriving at total FORD rate, arithmetic corrections shall be made as per the quoted basic rate/ tax rate for the purpose of computation to decide the relative position of bidder. However, for placement of order lower of the two values will be considered.

8. The tender offers of those Bidders, who do not agree to CSPTCL's payments terms, security deposit clause, liquidated damages clause, performance guarantee clause shall be liable for rejection.
9. A certified copy of valid ISI license/ marking sight may be submitted along with the offer. The license should be valid on the due date of opening of tender.
10. The tender document shall be available for sale in the Office of CE (S&P) on payment of the cost of tender document through demand draft / cash payment on all working days up to one day prior to the due date of opening. The tender document shall also be displayed in CSPTCL's website i.e. www.cseb.gov.in and bidders may download the tender from the website directly. In such case, the payment of cost of tender document shall be made through demand draft along with the tender. The details are given in clause No. 5 of Section-I (General Instruction to bidders).
11. The Company reserves the right to reject any or all tenders or accept any tender in full or part, considered advantageous to the C.S. Power Transmission Co. Ltd., whether, it is lowest or not without assigning any reason whatsoever.
12. **The bidder should ensure following points in order to avoid rejection of tender:-**
  - i) DD towards EMD **OR** proof of exemption valid on due date of opening is to be submitted in envelope –I. Please note that in case of exemption claimed from EMD by the SSI units registered under NSIC/ DIC, the copy of certificate issued by concerned authority along with enclosures, in which name of materials for which certificate has been issued should also be furnished. The name of material under tender should appear in this list. Further, the copy of certificate (each page) should be self attested. In case of non compliance of above instructions, tender shall be liable for rejection. **The bidder should furnish valid GST registration number and certificate along with EMD. In absence of GST registration the offer shall not be accepted.**
  - ii) DD toward tender document cost, in case tender has been downloaded from our website, is also to be placed inside envelope-I. In case of non compliance of above instructions tender shall be liable for rejection.
  - iii) Techno-Commercial Bid are to be submitted inside envelope II.
13. **EXTREMELY IMPORTANT (Bidders to note this to avoid bid rejection):-**
  - i) **It will be the sole responsibility of the bidder to make sure that all the documents required as per tender are submitted along with bid on or before due date of tender. The bid submission date is cut of date for all the documents required as per tender and every bidder must adhere to this dead line.**

However, if any short coming is observed during scrutiny of TC bid, CSPTCL reserves the right to seek required clarification/documents from bidder by giving them only one chance to submit required documents/ clarifications/ confirmations within specified time limit.
  - ii) **If a bidder has quoted 'NIL' deviation in Schedule- VIA (deviation from technical specification/ conditions) and Schedule- VIB (deviation from commercial conditions) this will have an overriding effect on any other conditions notes as deviations elsewhere in the bid.**

**GENERAL INSTRUCTIONS TO BIDDERS**

1. **SCOPE**:- The subject tender specification covers supply of 33KV Simplex type Control & Relay panels for transformers, and feeder as per technical specifications mentioned in section –II of tender document.
- 2.1 **ACCEPTANCE OF OFFERS**:- While the bidder may make all out efforts to offer for the complete scope of tender, they may please note that the CSPTCL reserves the right to split the tender into different lots towards supply.  
Bidders are advised to go through the contents of specific requirement for standard conditions very carefully and in absence of non-compliance/lapse, responsibility for the same will rest on bidder.
- 2.2 **CRITERIA FOR PLACEMENT OF ORDER**: -
  1. **For C.G. State SSI Units**:-

For C.G. State SSI units meeting all technical requirements of tender up to maximum 25% of tendered quantity is reserved for CG state SSI/MSME units for procurement of subject material to the following terms & condition.

    - (i) Chhattisgarh State based Micro and Small Enterprises (hereinafter referred as CG State SSI Units) should be registered under Micro, Small and Medium Enterprises Development Act, 2006 for tendered items.
    - (ii) CG State SSI units should have the requisite valid type test reports of tendered material/equipment and BIS License.
    - (iii) CG State SSI units-offering against reserved quantity for CG State SSI units, shall not quote price for tendered item.
    - (iv) CG State SSI unit shall offer minimum 10% of quantity allocated for CG State SSI units.
    - (v) Maximum quantity of tendered item which any CG State SSI unit may offer shall be restricted to 100 % of reserved quantity for CG State SSI Units. However, it shall be limited as per production/manufacturing capacity of that item (as mentioned in the SSI Certificate) with respect to time frame of supply mentioned in the tender.
    - (vi) If any CG State SSI unit submits the price bid in open tender, he shall not be considered against quantity reserved for CG State SSI units.
    - (vii) The rate quoted by the L-1 bidder in the open tender shall be counter offered to all eligible CG State SSI units. On receipt of their acceptance, earmarked quantity for CG units (maximum 25%) shall be equally distributed to all such firms subject to their individual ceiling.
    - (viii) In case of non/partial acceptance of allocated quantity by any CG State SSI units, the unallocated remaining quantity out of reserved tendered quantity (maximum 25%) shall be equally distributed among other eligible CG State SSI units subject to their consent and individual ceiling.
    - (ix) In case any quantity or whole quantity remains left from CG State SSI units, the same shall be allocated to regular bidders in same ratio as per tender clause.
    - (x) CG State SSI units are also eligible for extension order up to 50% of the original order quantity placed on them.

2. **For Regular Suppliers:-** The 75 % of entire tendered quantity will be distributed in the ratio 60% to L-1 bidder & 40% to L-2 bidder on counter offered rates, bidder will have to quote for entire quantity.

Sl. No.	Particular	Total Quantity(in No.)	Total Quantity for Regular suppliers(75 % of Total Quantity (in No.)	Quantity Distribution of placement of order	
				L1 -Bidder	L2 –Bidder (Subject to acceptance of counter offer)
1.	33KV simplex control & Relay panel for <b>Transformer</b> with all relays & accessories.	47	35	21	14
2.	33KV simplex control & Relay panel for <b>Feeder</b> with all relays & accessories.	97	73	44	29

In Case of **non participant/Non acceptance of C.G. State SSI Units**, the entire tendered quantity of 33 KV Control & relay panel for Transformer will be offered to respective L-1 bidder. The tendered quantity for 33 KV Control & relay panel for Feeder will be offered to maximum two parties. The **quantity will be distributed in the ratio 60% to L-1 bidder & 40% to L-2 bidder on counter offered rates, bidder will have to quote for entire quantity.**

Sl. No.	Particular	Total Quantity(in No.)	Quantity Distribution of placement of order	
			L1 -Bidder	L2 –Bidder (Subject to acceptance of counter offer)
1.	33KV simplex control & Relay panel for <b>Transformer</b> with all relays & accessories.	47	28	19
2.	33KV simplex control & Relay panel for <b>Feeder</b> with all relays & accessories.	97	58	39

The following points will also be considered for placing the orders:-

- (i) **The competitive rates quoted by each Bidder: - The original ranking based on FOR destination rates offered.**
- (ii) The orders on more than one party will be placed at the counter offered rate offered by the lowest bidder and other bidder will be asked to match their prices of L-1 rates. Order shall be placed only after receipt of acceptance of the counter offered rates. If other bidder denies counter offer the whole quantity will be offered to L-1 bidder. If L-1 rates is not considered to be reasonable negotiation will be held with the L-1 bidder only.

Bidders are requested to go through our Technical requirement carefully and it may be noted that furnishing of all information as required in various schedules enclosed



is a must. In case any of the schedule, duly filled in, is not found furnished as required in the Schedules /Annexure the tender will be treated as incomplete, and will be liable for rejection without any correspondence by the CSPTCL.

- 3.1 Extension Order :-** The CSPTCL reserves the right to place extension order for supply of 50% additional quantity of material/equipments with associated accessories within six months from date of order and accordingly offered prices should be taken into account for these requirements
- 3.2 Price reduction clause:-** In case a fresh tender is issued for the same item before completion of supply against extension order and lower rates are received in the fresh tender. The lower rates received in the fresh tender shall be applicable to the quantity of extension order balance to be supplied also.
- 4. OFFERS:-**The offer for equipment/materials are required to be submitted in Duplicate in separate sealed envelopes for which following details may be noted: -

**4.1 Part-I: EARNEST MONEY DEPOSIT:**

Please note that techno-commercial bid of tender will not be opened if earnest money is not deposited in form of demand draft for the value mentioned in tender clause No. 3 of “SPECIAL INSTRUCTIONS TO BIDDERS” in the tender, unless exempted by the CSPTCL.

The following are exempted from payment of EMD:-

- i) SSI units of Chhattisgarh state permanently registered with DIC. The registration should be permanent & should be specifically for the items quoted in the tender & valid on the date of opening of tender.
- ii) Small scale units registered with NSIC: - In case of small scale units registered with NSIC, their registration certificates should be valid for the item under tender on due date of opening of Techno-commercial bid. In case the certificate is not valid on due date of opening the tender shall be liable for rejection. *Incomplete certificate should not be submitted. The list of items for which certificate is valid should also be furnished and name of item under tender should appear in this list failing which tender shall be liable for rejection.*
- iii) Fully owned State Govt /Central Govt. units, if 100% shares are held by the state Govt. concerned for which documentary evidence must be furnished with offer.
- iv) The photocopy of the NSIC/ SSI registration certificate for the tendered item should be furnished with the offer.  
**It has been noticed that some bidders submit photocopy of certificate. This is not acceptable. The photocopy of valid NSIC certificate should be signed by authorized signatory failing which tender shall be liable for rejection.**
- v) The Bidders who come under any of above category must produce documentary evidence failing which offer shall be rejected.
- vi) **The bidder should furnish valid GST registration number and certificate along with EMD. In absence of GST registration the offer shall not be accepted.**

In case the bidder withdraws his offer during the validity period or after placement of order, the Earnest Money shall be forfeited. EMD of unsuccessful bidders shall be returned on placement of order. EMD of bidder on whom order is placed shall be returned on acceptance of security deposit. No interest shall be paid on the EMD amount.

**4.2 Part - II (A):- TECHNICAL BID:**

- 4.2.1 In this part of bid, Bidder will have to furnish confirmation in regard to all our Technical requirements. The bid should clearly describe various technical particulars, as per details given in this specification. Also along with above information all details required in

various schedules should be furnished so that the purchaser may be able to examine whether the offer submitted is technically acceptable or not. All relevant technical schedules viz. Guaranteed Technical Particulars, technical deviation etc shall be submitted with the bid.

#### 4.2.2 **COMPLETENESS OF EQUIPMENT AND BOUGHT OUT ITEMS: -**

The Bidders must furnish the following information along with technical bid.

- i) The responsibility for obtaining timely supplies of bought out items will rest on the Bidder and only on this basis, delivery period will be offered in the tender.
- ii) It may be noted in the case of damages/shortages due to improper packing or any other negligence; replacement shall be arranged within one month's time. If this is not done, date of delivery of such accessory will be treated as date of delivery of main equipment and full penalty shall be recoverable from the Bidder on total cost of the material.
- iii) For bought out items, responsibility for guarantee and obtaining immediate replacement in case any defects are noticed and in case defective supply of any item is reported will rest on the Bidder.
- iv) In case for attending to defect in any equipment or inspection/replacement of the equipment, which may be bought out item for the Bidder; services of engineer of original manufacturer is required, the same will be organized on immediate basis by the Bidder at his cost.

4.2.3 It would be obligatory on the part of Bidder to enclose a schedule of Technical deviation in Schedule VI-B in case there are any deviations from our technical requirement. **Even if no deviations are involved, a separate schedule of deviation for technical particulars should be enclosed wherein a certificate may be recorded that there are no deviations from all our technical requirements.** In the event of non-compliance of this instruction, it may be noted that the CSPTCL reserves the right to reject all such offers without assigning any reason or without making any correspondence for obtaining any clarification.

#### 4.3 **Part - II (B) COMMERCIAL BID:**

This bid should clearly spell confirmation in regard to various commercial terms and conditions for supply. Basis of price, acceptance of various important terms and conditions for supply and questionnaire for commercial terms and conditions for supply duly filled in, will form part of commercial bid. All commercial schedules viz. commercial terms & conditions, commercial deviations, bidders experience, details plan of manufacturing & testing shall be furnished with this bid.

It may please be noted that it is obligatory on the part of Bidder to comply with all our commercial terms and conditions. In particular, **specific confirmation towards acceptance of following commercial terms and conditions should be furnished in the tender.**

4.3.1 **PRICES:-** The prices offered should be valid for 180 days from due date of tender in Indian Rupees only. Quoted prices should be on the basis of firm rates.

It is not required to upload /attach scanned copy of price in soft/ hard copy. Only the rates are to be filled in the item tab in e-bid in SAP SRM System (online e- bidding portal). The prices should be quoted through SAP SRM system should indicating unit ex-works price inclusive of packing & forwarding charges, GST, freight charges & any other charges should be quoted separately. The freight shall be on FIRM basis irrespective of whether the ex-works prices are firm or variable. It may please be noted that only statutory variations due to Govt. Regulation in the rate of GST shall

be permitted by CSPTCL only within contractual delivery schedule. In case supplies against the contract are affected late i.e. beyond contractual delivery period and rate of GST undergoes upward revision the payment will continue to be made only on the basis of rates prevailing during the contractual delivery period. However, in case the rate of statutory levies undergoes downwards revision than the delayed supplies beyond contractual delivery period will attract reduced rate of levies/ GST.

#### 4.3.2 **TERMS OF PAYMENT:**

100% payment along with all taxes and duties shall be made on production of necessary documents along with material receipt certificate (MRC) from our consignee normally within 30 days time.

The supplier should submit original Material Receipt Certificate issued by the Area Stores along with copies of bill and other necessary documents to Manager (Bills), O/o ED (Finance) CSPTCL, Raipur for arranging payment.

#### 4.3.3 **DELIVERY PERIOD:-**

The delivery should commence in three months from the date of order with minimum 30% of ordered quantity and further 30 % of ordered quantity should be delivered in the one month thereafter and balance 40% shall be completed within one month thereafter 60 % quantity delivery i.e. a total period of five months from date of order.

The time for and date of delivery of the stores stipulated in the order shall be deemed to be the essence of the contract. In case of delay in execution of the order, the CSPTCL shall either:-

- (a) Recover from the supplier as agreed Penalty/liquidated damages at the rate mentioned in "Liquidated damage" clause.
- (b) Purchase elsewhere on account and at the risk of the supplier, the stores not delivered or other of similar description or;
- (c) Cancel the contract.

#### 4.3.4 **Liquidated Damages:**

The time for and the date of delivery of the material stipulated in the order shall be deemed the essence of the contract. In case of delay in execution or non-execution of the order, the CSPTCL at its option shall recover from the supplier/contractor as agreed towards liquidated damages a sum of ½ % of **the basic price excluding taxes of any store not delivered per week or part thereof up to a maximum of 10% of contract value excluding taxes.**

For this purpose date of offer (**date of readiness of material for inspection shall be treated as date of offer**) for inspection of material in the O/o CE (S&P) shall be considered as the date of delivery subject to condition that:-

- i) The intimation of readiness of material in respect of each lot should be made at least 15 days in advance from the scheduled date of completion of supply.
- ii) Material should be delivered at stores within 21 days from issue of dispatch clearance. Please note that in case material is not received within 21 days from date of issue of dispatch instructions even though the delivery period exists liquidated damages shall be imposed on delay of dispatch.

The inspection offer, apart from postal/courier service shall be invariably **Faxed/E-mailed** to the CE (S&P) so that ambiguity does not arises for date of offer. In case the inspection offer is not received in the O/o CE(S&P) through Fax/E-mail the date of receipt of offer letter shall be taken as date of offer for inspection.

#### 4.3.5 GUARANTEE PERIOD:

Equipments offered and associated accessories covered under the tender shall be guaranteed for performance and quality for a period of 30 months from the date of supply in Store or 24 months from date of commissioning whichever is earlier.

In case any defect in the equipment/material is found within guarantee period, the same will be replaced /repaired by you on free of cost basis. The replacement/repairing will have to be organized by you expeditiously and in any case within one month's time.

If for the purpose of replacement/repairs, the equipment/material is required to be dispatched to your works, all charges towards transportation/insurance/ packing/ forwarding will have to be paid by you for to and fro dispatches. In this connection, please note that the following additional conditions will also be applicable in case any damages/defects are noticed in the equipments or its accessories supplied by the firm.

- (i) If the material develops defect within guarantee period after installation at site, for the purpose of replacement/repairs & if the same is dismantled and taken out by us. In such cases actual cost of dismantling and replacement of the equipment/material will also be recoverable from you.
- (ii) In case it is observed that replacement/repairs of equipments or its accessories is not being provided to us within one month time from date of report of defect to you and proper response is not received from you, then apart from operating clause of penalty (which provides for imposition of penalty/liquidated damages, risk purchase at your cost and cancellation of contract) the CSPTCL may also take suitable penal action against you which may include debarring you from all future business with the CSPTCL for a period which will be at the discretion of the CSPTCL.
- (iii) In case of replacement of material due to failure within guarantee period, the guarantee shall automatically get extended. In such case, the material shall be guaranteed as per the terms of guarantee with the commencement date of guarantee from the date on which replaced material has been received.

#### 4.3.6 SECURITY DEPOSIT:

The supplier has to submit the security deposit in form of Demand Draft / Bank Guarantee for value of order as indicated below to cover performance guarantee period for supply of equipments covered in this specification.

- (i) All the outside state units shall be required to pay security deposit @10% of order value.
- (ii) All the SSI units of CG having annual business above Rs.50.00 Lacs, shall be required to pay Security deposit @7.5% of the value of order subject to maximum of 10 Lacs.
- (iii) In case of SSI units of CG whose annual is up to Rs.50.00 Lacs, they will be required to pay Security deposit @ 5% of the value of order subject to maximum of Rs.20,000/- (Twenty Thousand Only).

In support of annual business of SSI units of CG the certificate of Chartered Accountant should be furnished. **This bank guarantee shall be submitted within 30 days of order and shall be kept valid for guarantee period exceeding claim period of 6 months.** The bank guarantee shall be submitted on stamp paper worth Rs. 250/- or as per the prevailing legal requirements/ any other amount as per the C.G. State Stamp Duty Act and shall be from a Nationalized/ Scheduled Bank in the prescribed form of CSPTCL. No interest shall be paid by CSPTCL on the security deposit. In case of non-fulfillment of contractual obligations by the supplier the security deposit shall be forfeited.

#### 4.3.7 TRANSIT INSURANCE & RISK:-

- a) Responsibility regarding covering of risk, during transit of material shall entirely be on the supplier. The CSPTCL, shall in any case, not bear the transit risk/transit insurance charges.
- b) Transit damages/ shortages/ losses shall be reported by the consignees within 30 days from the receipt of the consignments. Such damages/shortages/losses shall be repaired /replaced by the suppliers, free of cost within one month from the date of intimation by the consignee without waiting for the settlement from carrier or insurance company etc. If the supplier fails to do so the consignee(s) shall be free to get the repair work done from other sources and they shall be free to recover the cost of such material/ expenses of repairs either from the supplier/balance bills or from the security deposit as deemed fit.
- c) While the necessary assistance shall be rendered by the consignee in lodging and processing the claims with carriers and the supplier's insurance underwriters, the responsibility shall rest with the supplier to immediately make good the shortages/ losses/ damages, without extra cost and without waiting for the settlement of the claim.
- d) Replacement of goods lost/ broken or damaged including loss to fire:- Notwithstanding anything herein contained, the supplier shall undertake responsibility for the safe arrival of the material in good condition and without any loss or damage at the final destination and until the same is actually delivered to / received by the CSPTCL at its stores or other places of final destination. For this purpose, material carried by Railway or Road transport or other carriers shall be deemed to be so carried at the risk of the suppliers. In the case of transport damages/shortages, the payment shall be made only for the quantity received in good and working condition and consignee shall lodge claim with the supplier/carrier with necessary documents of the same with carriers at supplier's end.

#### 4.3.8 DEVIATIONS:-

It would be obligatory on the part of the Bidder to enclose a separate schedule of deviation, if there are any deviations from our commercial terms/conditions. Even if no deviations are involved, **a separate schedule of deviation for commercial conditions should be enclosed wherein a certificate may be recorded that there are no deviations from all our commercial conditions.** All tenders, wherein these conditions are not complied with, may run the risk of rejection without any correspondence from our side.

- 4.3.9 **UNSATISFACTORY PERFORMANCE:-** The bidder who has supplied material earlier in CSPTCL and which has been found to be defective / not rendering satisfactory service within guarantee period and has not been replaced in the stipulated period shall not be considered for opening of price bid.

In addition to the above, the bidders who have supplied material to CSPTCL and if any adverse reports regarding higher rate of failure, poor performance of equipment or defective supply reported from field, the price bid of such bidders shall not be considered for opening. (The cases reported as on date of NIT shall be considered).

#### 4.4 Part - III PRICE BID:-

**It is not required to upload /attach scanned copy of price in soft /hard copy. Only the rates are to be filled in the item tab in e-bid in SAP SRM System (online e- bidding portal).** The prices should be quoted through SAP SRM system should indicating unit ex-works price inclusive of packing & forwarding charges,

GST, freight charges & any other charges should be quoted separately. However, the delivery schedule offered by bidder should be indicated in Part – II B “Commercial Bid”. In case of any discrepancy is found suitable loading on prices will be considered for which responsibility will rest on the Bidder.

**5. SUBMISSION OF OFFERS:-** The Bidders should submit their bids in three envelopes as under:-

- (i) **Envelope – I** (To contain Part-I of the tender document) This envelope should contain a covering letter with earnest money or earnest money exemption certificate as detailed in clause (4.1). The cover of the envelope should be suitably super scribed with the details of earnest money and tender number. The envelope should be sealed properly. **The bidder should furnish valid GST registration number & certificate alongwith EMD. In absence of GST registration the offer shall not be accepted.**

In case the tender document is downloaded from CSPTCL’s Website the required cost of tender document in the form of MICR DD drawn in favour of Manager (RAO-HQ), CSPTCL, Raipur should also be kept inside this Envelope.

**Please note that the tender shall be liable for rejection if**

- i) EMD as per tender specification / proof in support of exemption of EMD as per clause 4.1 is not found inside the envelope.
  - ii) **The GST registration certificate is not furnished.**
  - iii) In case DD towards tender cost is not found inside this envelope in case tender document is downloaded from website.
- (ii) **Envelope - II :-** (To contain Part-II of the tender document) This envelope should contain the Technical Bid and commercial bid complete in all respects, in duplicate and Integrity Pact as per proforma provided in the Annexure IV.
- (iii) **Envelope - III:-** This large envelope should contain the above two envelopes. A certificate in the following format should be recorded on main envelope itself.

**TENDER SPECIFICATION No. TR-20/S&P/54 DUE FOR OPENING ON DTD .../.../2021 FOR SUPPLY OF 33 KV CONTROL & RELAY PANEL FOR TRANSFORMERS & FEEDERS.**

**In case tender document is downloaded from website the envelope should also be Super scribed “DOWNLOADED FROM WEBSITE –TENDER COST FURNISHED”**

THIS ENVELOPE CONTAINS TWO ENVELOPES FOR:-

1. Envelop-I- Part – I of tender document i.e. Earnest Money Deposit GST registration certificate & cost of tender document, if downloaded.
2. Envelop-II- Part – II (A) i.e. Technical Bid & Part II-(B) i.e. Commercial Bid & Integrity Pact as per proforma in Annexure-IV

To,  
**The Chief Engineer(Store & Purchase),  
C.S. Power Transmission Co. Ltd.,  
Danganiya, RAIPUR (C.G.) 492 013**

IT IS CERTIFIED THAT WE AGREE TO THE FOLLOWING CLAUSES OF TENDER SPECIFICATION:-

1	payment terms	agreed
2	security deposit	agreed
3	Liquidity damage	agreed
4	performance guarantee & integrity pact	agreed
5	technical specification	it is certified that the material offered by us is strictly as per technical specification as stipulated in this tender and in case any deviation is observed later on, we shall be solely responsible and that our tender shall be liable for rejection.

### *Sign & Seal of Bidder*

Tenders being submitted must be signed by a person holding a power of attorney authorizing him to do so. The notarized copy of power of attorney should be furnished. Tenders submitted on behalf of company registered under Indian Companies Act shall be signed by persons duly authorized to submit the tender on behalf of the company and shall be accompanied by notarized copy of resolution / abstract of Article of Association/ special or general power of attorney.

#### 6. OPENING OF TENDERS:-

Part - I i.e. The envelop for Tender Cost (if downloaded), Earnest Money & GST registration certificate shall be first opened on the due date & time. Part-II i.e. "Technical & Commercial Bid" will be opened thereafter on the same day in respect of the bidders **whose GST registration certificate is attached and EMD are found to be as per tender specification.** These bids will be scrutinized and then we will take decision regarding opening of price bid in respect of successful Bidders. For the purpose of opening of price bid, a notice of not less than 7 days shall be given to the Bidders so that they may depute their representative for attending price bid opening. It may be mentioned that period of 7 days will be counted from the date of issue of fax intimation by us. Such intimation shall be given within a reasonable period from the date of opening of commercial and technical bids, and after its scrutiny. **Only authorized representatives possessing necessary authority letter from the Bidder shall be allowed to participate in the tender.**

#### 7. COMPLIANCE WITH OTHER CONDITIONS :-

Although all other conditions have clearly been spelt out in the tender document, it is once again brought to the notice of Bidder that they should go through our tender document carefully and comply all other conditions also, like furnishing of type test report, furnishing of list of past supplies, performance certificate, profit and loss account & balance sheet for last five years along with furnishing of drawing and write up for the manufacturing process. In the nut shell, the offer at the time of submission of Technical and Commercial bid itself should be complete in all respects. It should not be expected that in case of lack of any information, the CSPTCL will make any correspondence with the Bidder. The documents and details as called for in the tender must be submitted without making any reference to submission of such certificate against past order, tender or past experience of supplies with the Board/CSPTCL etc. All tenders wherein these

conditions are not complied with may run the risk of rejection without correspondence from our side.

#### **8. CHANGE OF QUANTITY:-**

The purchaser reserves the right to vary the quantities of any or all the items as specified in the technical specifications/schedules as may be necessary based on requirement. No correspondence shall be entered into regarding quantity variation.

#### **9. INSPECTION:-**

- a) The CSPTCL shall have access at all times to the works and all other places of manufacturer where the equipments are being manufactured and the supplier shall provide all facilities for unrestricted inspection of the suppliers works, raw material, manufacture of all the accessories and for conducting necessary tests as detailed herein.
- b) The successful supplier shall keep the purchaser informed in advance of the time of starting and of the progress of manufacture of equipment in various stages, so that arrangements could be made for inspection.
- c) No material shall be dispatched from its point of manufacture unless the material has been satisfactorily inspected and tested by the CSPTCL representative.
- d) The acceptance of any quantity of equipment shall in no way relieve the successful supplier of his responsibility for meeting all the requirements of this specification and shall not prevent subsequent rejection if such equipment are later found to be defective.
- e) The readiness of material for inspection should be intimated to O/o the CE (S&P), CSPTCL at least 15 days in advance so that Inspector can be deputed on scheduled date. In case material is not found ready on the intimated date of readiness, the CSPTCL reserves the right to recover from the supplier the charges.

#### **10. Random Testing:-**

- a) The CSPTCL's authorized Inspector shall test the samples selected at random from the material offered for inspection and tests as per relevant ISS shall be conducted at firm's works on the randomly selected samples. In case, the samples fail to withstand the required tests, the entire lot will be liable for rejection .
- b) However, inspection of material before dispatch or waiver of inspection will not relieve the supplier from his responsibility to supply the material strictly in accordance with the tender specification.
- c) If required, the Company may at its option test the samples selected at random from the supplies affected and/or may get the selected samples tested for acceptance / type test as per relevant ISS and Technical specifications at any standard laboratories as deemed fit e.g. CPRI, ERDA etc.
  - i) If the sample passes the test, charges towards testing & transportation shall be borne by CSPTCL & the lot shall be accepted.
  - ii) In case, the samples fail the required tests, supplier will be required to bear all the charges including transportation and taxes etc paid to standard laboratories e.g. CPRI, ERDA etc. towards conducting the tests and the entire lot will be liable for rejection. The supplier will have to replace/repair the whole rejected lot at his own cost.



iii) The replaced material, at CSPTCL's option shall be tested for acceptance tests in the Govt. standard laboratory as deemed fit on terms & conditions similar to first testing. If the sample passes the required test, the lot shall be accepted. The charges required for getting the tests conducted shall be borne by CSPTCL. If the sample again fails, the lot shall be rejected & the charges required for getting the tests conducted shall be borne by the supplier and action as per provision of contract shall be taken.

**11. STAGE INSPECTION:-** The CSPTCL reserves the right to carryout stage inspection during manufacture. The inspection will include verification of all raw materials, construction practice, quality control process and inspection of equipment before final assembly. Bidders will have to confirm that they will render all assistance for this purpose.

**12. FALSE INSPECTION CALL:**

In case, the material is not offered for inspection on the date of inspection offered by the firm, due to any reason the firm shall be required to remit a sum of Rs.50,000/- plus expenditure incurred toward deployment of officer.

**13. QUALITY ASSURANCE PLAN:**

The supplier shall invariably furnish following information along with his offer, failing which the offer shall be liable for rejection. Information shall be separately given for individual type of equipment offered.

- (a) Statements giving list of important raw materials, name of sub-suppliers for the raw material, list of standards according to which the raw material are tested, list of tests normally carried out on raw material in presence of suppliers representative, copies of test certificates.
- (b) Information and copies of test certificates as in (a) above in respect of bought out items.
- (c) List of manufacturing facilities available.
- (d) Level of automation achieved and list of areas where manual processing exits.
- (e) List of areas in manufacturing process where stage inspections are normally carried out for quality control and details of such tests and inspections.
- (f) Special features provided in the equipment to make it maintenance free.
- (g) List of testing equipment available with the supplier for final testing of equipment specified and test plan limitation, if any, vis-à-vis the type/ special acceptance and routine test specified in the relevant standards. These limitations shall be very clearly brought out in schedule of deviations from specified test requirements.

**14. TEST CERTIFICATE:-**

Self attested copies of type test carried out at and issued from ISS/ IEC carried out ISS/ IEC carried out at & issued by Govt. Standard laboratory /NABL accredited laboratory / ILAC accredited Laboratories shall be submitted along with the tender failing which the tender will be liable for rejection. The type test certificate of tendered item material shall not be more than 7 years old from date of NIT. Without required type test certificate the offer shall be liable for rejection.

**15. CANCELLATION OF ORDER:-**

15.1 The CSPTCL may upon written notice of default, terminate contract in the circumstances detailed hereunder:-

- (a) If in the opinion of the CSPTCL, the supplier fails to deliver the material within the time specified or during the period for which extension has been granted by the CSPTCL.

- (b) If in the opinion of the CSPTCL, the supplier fails to comply with any of the other provisions of this contract or material is found not in accordance with prescribed specifications and or the approved samples.
- (c) If as a result of stage inspection, it is revealed that material and / or, workmanship is substandard which is likely to affect the performance of the finished product, a notice would be served by the CSPTCL to the supplier to suspend further activities and to take urgent steps towards corrective measures, failing which the entire order would be cancelled.
- 15.2 In the event of such termination, the CSPTCL shall exercise its discretionary power as:-
- a) To recover from the supplier the agreed liquidated damages as approved in the clause No. 4.3.4 above.
- OR**
- b) To purchase from elsewhere after giving due notice to the supplier on account and at the risk of the supplier such stores/materials not so delivered or otherwise of similar description of material in respect of consignment not yet delivered.
- OR**
- c) To cancel the contract reserving CSPTCL's right to recover damages.
- 15.3 Notwithstanding that the power under clause (15.2 a, b & c)) referred to above, are in addition to the rights and remedy available to the CSPTCL under the general law of India relating to Contract.
- 15.4 In the event of risk purchase of stores of similar description, the opinion of the CSPTCL shall be final. In the event of action taken under clause 15.2 (a or b) above, the supplier shall be liable to pay for any loss, which the CSPTCL may sustain on that account but the supplier shall not be entitled to any saving on such purchases made against the default.
- 15.5 The decision of the CSPTCL shall be final regarding the acceptability of the stores supplied by the supplier and the CSPTCL shall not required to give any reason in writing or otherwise at any time for the rejection of the stores/material.
- 15.6 In the event, CSPTCL does not terminate the order as provided in clause 15.1 & 15.2 above, the supplier shall continue execution of this order, in which case he shall be liable to the CSPTCL for liquidated damages for the delay as per clause 4.3.4 until supplies are accepted.
16. **ARBITRATION**:- If, at any time any question, dispute or difference, whatsoever shall arise between the purchaser and the supplier, upon, or in relation to or in connection with the Contract, either party may forthwith give to the other, notice in writing of the existence of such question, dispute or difference and the same shall be referred to the adjudication of two arbitrators, one to be nominated by the purchaser and the other to be nominated by the supplier or in the case said arbitrators not agreeing, then to the adjudication of the Umpire to be appointed by the arbitrators, whose decision shall be final and binding on the parties and the provision of the Indian Arbitration Act, 1940 and its latest amendments, and of the rules there-under any statutory modification thereof shall be deemed to apply. The arbitrators or the Umpire, as the case may be, are bound to give a detailed speaking award assigning reasons for the findings.

Supplies under the contract shall be continued by the Contractor during the arbitration proceedings, unless otherwise, directed in writing by the Purchaser or unless the

matter is such that the work cannot possibly be continued until the decision of the arbitrators or of the Umpire, as the case may be, is issued.

17. **JURISDICTION:-** Any dispute or difference, arising under, out of or about this tender/contract order shall be subject to exclusive jurisdiction of competent court at Raipur only.
18. **POOL RATE/CARTEL:**

Formation of bidder's cartel is strictly prohibited. "Cartel" includes an association of sellers, distributors, traders or service providers who by agreement amongst themselves, limit, control or attempt to control the production, distribution, sale or price of or trade in goods or provision of services, Here, "agreement" includes any arrangement or understanding or action, whether or not is formal or in writing.

Quoting same rates i.e. pool rate is not acceptable. In case the same rate is found to be quoted by more than two bidders, offers of all such bidders shall be out rightly rejected. However, if rates of two bidders are found to be same, quantity of orders to be placed on them will be reduced to half of the quantity a bidder is entitled to be allocated by virtue of their common rank. But, in case of multi-item tender, if rates of even two bidders for more than one item are found to be same, it will be considered as deliberate cartel and offers of both the bidders shall be rejected. Accordingly, all the bidders are advised to quote their own individual and most competitive rates.

Rated received in a tender will be minutely scrutinized to find out as to whether some or all bidders have entered in to any such agreement. If CSPTCL is satisfied with the conclusion that some or all the bidders have formed a cartel, offers of all such bidders shall be rejected.
19. **Amendment in specifications:** CSPTCL may revise or amend the specification and drawing, prior to the date notified for opening of tender. Such revision/ amendment, if any, will be communicated to all the bidders as amendment/ addendum to the invitation of tender and the same will be displayed in CSPTCL's website also.
20. **Telex/ telegraphic/ fax bids:** Telex/ telegraphic/ fax offers will not be considered under any circumstances.
21. **Mistakes in bids:** Rates should be quoted in both figures and words. In case of ambiguity between rates in figures and words, lower of the two shall be considered. Such offers can also be rejected.
22. **Lump sum based bids:** In case prices for some items or all items are given as lump sum, instead of unit prices as required in the tender specifications, CSPTCL can summarily reject such incomplete tender.
23. **Printed terms & conditions in bids:** Supplier's printed terms and conditions will not be considered as forming part tender under any circumstance whatsoever.
24. **Alterations/ correction in bids:** No alternations in the tender document will be permitted.
25. **Incomplete bids:** Tender which is incomplete or obscure is liable for rejection.
26. **Ambiguities in conditions of bids:** In case of ambiguous or self contradictory terms/ conditions mentioned in the bid, interpretations as may be advantageous to the CSPTCL may be taken without any reference to the tender.
27. **Disqualification of bids:** A bid which gets opened before the due date as a result of improper or no indication has been given on the cover to indicate that it is a tender, will be disqualified. Bidders will not be permitted to change the substance of his tender on post interpretation/ improper understanding grounds. This includes post

tender price changes/ modifications etc. after opening of price bid. In such events, otherwise, that is, when a bidder does not comply, tender will be rejected.

28. **Language of bids:** All tenders should be made either in English or in Hindi only.
29. **Canvassing of bids:** Tenders shall be deemed to be under consideration, after opening of tender/ bid till placement of order. During this period, the bidders or their authorised representatives or other interested parties are advised strongly in their own interest, to refrain from contacting by any means any of the CSPTCL's personnel or representative.
30. **Approval of Drawing:** - The drawings of the ordered material should be submitted to this office within 10 days from the date of order for approval.
31. **Variation in quantity:** A tolerance in the ordered quantity will be allowed to the extent of +/- 2% (plus minus 2%). This tolerance will be allowed on total ordered quantity. The MRCs shall be issued on actual receipt of quantity only.
32. **Limitation of Liability :-** Except in cases of gross negligence or wilful misconduct,
  - a) The contractor and CSPTCL shall not be liable to the other party for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the contractor to pay liquidated damages to the CSPTCL

**AND**

  - b) The aggregate liability of the contractor to CSPTCL, whether under the contract, in tort or otherwise, shall not exceed the total contract price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipments, or to any obligation of the contractor to indemnify CSPTCL with respect to patent infringement.

**Chief Engineer (S&P)  
CSPTCL: RAIPUR**

## **SECTION II (A)**

### **TECHNICAL SPECIFICATION FOR 33 KV CONTROL & RELAY PANELS FOR TRANSFORMER**

#### **1.1 SCOPE :**

This section contains the technical specification for 33 KV Single Control & Relay panels for Transformers protection.

#### **1.2 LIMITS OF CONTRACT :**

The various control and relay panel and other requirements specified under this section shall be complete in themselves with all main and auxiliary relays, fuse links switches where necessary, small wiring, labels terminal board, earthing terminals foundation bolts, interior illumination, cable glands etc.

The supply and laying of the control and power cables interconnecting the various equipments is not covered under the specification. The cable terminating arrangements, viz., the cable hold support boxes, cable glands, sealing ends for other types of cables that may be specified, shall however be included, where ever required for connection to the equipments under this contract and in the tender price. These shall be subject to our approval.

#### **1.3 CLIMATIC CONDITIONS:**

Peak Ambient Temperature	50 Degree Celsius
Minimum Temperature in Shade	6 Deg. C
Maximum Relative Humidity	95% (sometime approaches saturation)
Average Number of Thunderstorm	58 days per annum.
Average No. of rainy days per annum	90 days.
Average Annual Rainfall	125 cm.
Maximum Wind Pressure	150 kg/meter square.
Altitudes (Not Exceeding)	1000 metres.
Seismic Level Horizontal	0.3 g.

#### **1.4 STANDARD SPECIFICATION :**

##### **1.4.1 PANEL FINISH AND COLOUR :-**

The exterior colour finish of panels shall be opeline green as per colour No. 275 of BS:381 C:1948, equivalent colour as per relevant Indian Standards or any other standard shall be accepted. This colour finish shall be applied on the exterior steel works of the panels. The exterior opeline green paint finish shall be semi-glossy only and shall not be fully glossy. The interior of panels shall be painted with egg shell white.

##### **1.4.2 Pretreatment & painting process:**

Process of painting of panels to be followed by the bidders for all the panels included under this tender specification shall be as given in **annexure-I** enclosed. The sheet steel fabricated members shall be subjected to pre treatment processes before painting. This process shall be carried as indicated in Annexure-I. Please note the process indicated in Annexure-I should be strictly followed and confirmation may be made in your offer. This is very important.

### 1.4.3 **PROTECTIVE RELAYS AND INSTRUMENTS :-**

A. The protective relays shall be manufactured tested and supplied with guaranteed particulars generally confirming to the latest issue of the following Indian Standard Specification:

i)	IS-3842 (PART I TO V) latest edition	Application guides for electric relays for AC system.
ii)	IS-3231	Electric relays for power system protection.
iii)	IS-1885 (PART I & II)	Electric technical vocabulary- electrical relays and Electrical power system protection.
iv)	IS-1248, IS-2419	Indicating instruments.
v)	IS-722	Energy meters, control switches (LV switching devices for control and auxiliary circuits)
vi)	IS-5	Colour sheds.
vii)	IS-2705	Current transformers.
viii)	IS-3156	Voltage transformers.
ix)	IS-4237	General requirements for switchgear and control gear for voltage not exceeding 1KV.
x)	IS-375	Marking and arrangements for switchgear busbars, main connection and auxiliary wiring.
xi)	IS-8686	Specification for static protective relays.
xii)	IS-4483	Preferred panel cut out dimension for relays.

B. **TYPE TEST :-**All the main relays such as transformer differential relays, feeder distance protection relay & O/C E/F relay offered shall be fully type tested as per the relevant standards. In case the equipment of the type and design offered, has already been type tested, the supplier shall invariably furnish the type test reports from the approved laboratory to prove indicated accuracy and other specifications of the relays offered. The test certificates shall clearly indicate the type and model No. etc., so that relevant details could be verified. While submitting offer the model and type etc. shall be clearly indicated. The type test reports so furnished should not pertain to the period earlier than seven years from the date of NIT. The tenders not accompanied by the above type test report shall run the risk of rejection.

### 1.4.4 **PANEL CUT OUT AND DIMENSIONS :**

- i) The panels shall be simplex type and fabricated not less than 14SWG sheet steel. The main load bearing parts such as front panel, rear panel, base frame will be 3 mm thick and the other non load bearing members such as side panel, cubicle roof, door shall be of 2 mm thick. Detachable cable gland plate should be 4 mm

thick and shall be mounted at the bottom. Rest bottom portion of C&R panel is to be blanked with 3mm sheet.

- ii) The sheet steel should be free from all surface defects. The panels shall have sufficient structural reinforcement to ensure a plain surface to limit vibration and to provide rigidity during dispatch and installation.
- ii) Bidder to submit schematic GA drawing of each type of panel in their offer.

The Panels shall have the following dimensions:

**33 KV Single transformer C&R Panels:-**

Type	: Single
Height	: 2312 MM (Panel-2210 mm+ base frame 102mm)
Depth	: 560 MM
Width	: 660 MM
Bus Mimic to be provided in the panel at a height from the base of the panel.	: Main Bus - 1592 MM Transfer Bus - 1542 MM

Please also submit a G.A. drawing of each type of panel offered.

- iii) The control panels shall be floor mounting dead front sheets steel assemblies of unitized design.
- iv) The panels shall be made in suitable sections as described elsewhere in the specification so that while mounting, the panels can be located side by side bolted together to form a compact unit.
- v) Design material selection and workmanship shall be such as to present a peak appearance, outside and inside with no works of welds, reverts, screw or bolts head apparent from the exterior surfaced of the control boards.
- vi) The panels shall be vermin proof and suitable for IP 54 protection.

1.4.5 In the paragraph 1.4.2 the relevant Indian Standard Specification/British standard specification have been mentioned. However, the equipment meeting any other authoritative standard which ensures equal or better quality than the standards mentioned shall also be acceptable. Equipment for which Indian Standards are not available, the relevant British standards and IEC recommendations will be applicable.

1.4.6 **PANEL LIGHTING** :-

- a) In each control and relay panel for interior illumination one LED bulb 12W operating at 230V 50 cycle with door operated switch shall be provided in the corridor. The LED bulb shall be located at the ceiling and guarded with a protective cage.  
One No. 15 A, 3 pin receptacle sockets with plug and switch shall be provided for each of the control panel of simplex C&R panels. The third pin of the socket shall be effectively earthed through the metallic structure. The socket shall be industrial grade control panel type complete with protective metallic cover.

#### 1.4.7 AUXILIARY SUPPLY:

For each control panel to be provided the following:

- a) (i) 230 V single phase 2 wire 50 C/s, neutral grounded A.C. supply.  
(ii) 110 V or 220V DC
- b) H.R.C. fuses shall be provided at each panel for both the A.C. and D.C. Power supplies. Distribution of the same shall be utilized through fuses and links in such a way so that isolation of respective system is possible without affecting the rest of the system.
- c) All H.R.C. fuses and links shall be with holder, and the same shall be mounted on slant support and with identification labels.
- d) The H.R.C. fuses as per following details shall be provided:

S. No.	CIRCUIT	FUSE RATING
1.	Circuit breaker closing circuit.	10 A
2.	Trip circuit I & II	16 A
3.	Main protection	10 A
4.	Indication	4A
5.	Annunciation	4A
6.	P.T. Circuit	4A

#### 1.4.8 CONTROL WIRING :

- a) The successful bidder shall furnish and install complete wiring upto the terminal block for the equipment, instrument devices mounted in the Relay control Panel strictly accordingly to the approved wiring diagram prepared by the bidder based on the purchaser's approved schematic diagram.
- b) The wiring shall be completed in all respects so as to ensure proper functioning of control, protection and metering schemes.
- c) All spares contacts of relays and switches shall be wired up to the terminal blocks.
- d) Each wire shall be identified at both ends with wire designation number by PVC ferrule as per wiring diagram based on latest revision of IS-375 to denote the different circuit functions. The contractor shall take approval for the system of wire numbering.
- e) Colored wires shall be used for wiring as per latest revision of IS-375 viz; red, blue, yellow and black for R,Y,B, phases and neutral respectively for CT & PT circuits, green for earthing and grey for control & annunciation circuits.
- f) All wires termination shall be made with **Cu lugs** with proper crimping. Wires shall not be tapped between terminal points.
- g) All series connected devices and equipment shall be wired up in sequence. Loop-in Loop out system of wiring shall be avoided as far as possible and the common buses shall normally be made through the terminal block for better reliability of testing and maintenance.
- h) Fuses and links shall be provided for isolation of individual circuit from bus bars without disturbing other circuits and equipments.
- i) The DC trip and DC voltage to main protective gear shall be segregated from those for special purposes. Each such group shall be fed through separate fuses.
- j) Since a number of wires will run from one point to another, it is desired that the support arrangement should be adequate and neat & clean. The



conventional method of bunching of wires should not be adopted since the same creates problems in case any wire is to be removed. The wires should be accommodated in a suitable plastic channels with sliding plastic cover, which may be mounted inside the panels suitably. Inspection/removal of wires should be possible by sliding the covers.

- k) Blank plastic channels should be provided by the sides of the panels to accommodate the incoming cables from switchyard through the cable glands.

#### 1.4.9 **TERMINAL BLOCKS:**

- a) Multi-way stud type terminal blocks 10 A current carrying capacity complete with necessary binding nut and bolts , washers for wire connection and marking strip for circuit identification shall be furnished for terminating in the panel wiring and outgoing cables. The terminal connectors shall be suitable to receive 2 x 2.5 sq. mm/ 2x4 sq. mm copper conductor of control cables
- b) Best quality sliding type, disconnect able terminal connectors may be used to CT & PT circuits .All other terminals shall of stud type.
- c) The terminal blocks shall be grouped according to the circuit functions and each terminal block group shall have at least 20% spare terminals.
- d) Not more than two wires shall be connected to any terminal or either side of the terminal block. If necessary, a number of terminals shall be jumpered together to provide the wiring points.
- e) Each terminal point shall be marked with designation as per the schematic drawings.
- f) Adjacent rows of terminal blocks shall be spaced not less than 100 mm apart. They shall be mounted vertically at the sides of the cubicle and the terminal block shall be arrange in a such way to give an easy access for termination and enable ferrule number to be read without difficulty.
- g) The bottom of terminal blocks shall be spaced at least 300 mm above the base plate for ease of termination.
- h) Separate test terminal block should be provided for the KWH meters to facilitate the testing and calibration of energy meters without disturbing the other circuits such as ammeter/MW meters. The TTBs should be 3phase, 4 wire with screw type CT shorting arrangement.

#### 1.4.10 **CABLE ENTRY** :-

- a) The control board shall have provision of cable entry from the bottom. Necessary cable glands should also be provided. The purchaser will arrange for necessary floor opening below the panels to suit the cable trench design of purchaser's requirement.
- b) The wiring through the terminal blocks shall be so located so as to be convenient for floor openings.
- c) Gland plate shall be supplied with factory made gland holes with suitable blanking arrangement for un used gland holes. The gland plate and doors shall be properly gasketted.
- d) Rigid supports shall be provided along with terminal block for holding plastic channel. Suitable clamps may also be provided in plastic channel for holding cables.
- e) The following quantities of cable glands fitted with blanking plate shall be supplied along with each panel:

- i) For 8 core x 2.5 sq. mm 1.1 kV Control cable : 2 Nos.
- ii) For 4 core x 2.5 Sq. mm 1.1 KV Control cable : 4 Nos.
- iii) For 12 core x 2.5 sq. mm 1.1 KV Control cable : 2 Nos.

All the panels end doors shall be provided with suitable handle and lock

#### 1.4.11 **GROUNDING** :-

- a) 25 mm x 6 mm copper ground bus bar shall be provided for both C&R Panel control & relay side extending along with entire length and effectively grounding all relays & other equipments mounted in the C&R panels.
- b) Earthing bus bar shall have a provision of two points for the connection to the S/S earth mat at two separate points for connection to main ground grid of the substation.
- c) Every equipment shall be connected to the common ground bus in such a way that the earthing will be ensured even removing of any relay / equipment.

#### 1.5 **CONTROL AND RELAY PANEL** :

- 1.5.1 The Control and relay panel required at all substations of CSPTCL shall be Simplex or single type. The control, recording and indication apparatus shall be mounted in the front panel. These shall be of the flush mounted type. The relays shall be mounted on the front side also and may be of the projecting/flush mounting type
- 1.5.2 Suitable tube light shall be provided inside the panels for adequate illumination & the same being controlled by a switch provided on one end,
- 1.5.3 The labeling bolt for the C&R panel shall be provided at the front /rear side of control panels.
- 1.5.4 The panels shall be of uniform thickness and level sheet steel of minimum 14 gauge (3mm for load bearing sides & 2mm for other sides). The panel shall be designed to be self supporting. All control panels and switchgear cubicles shall be made absolutely vermin proof design.

#### 1.6 **CONTROL & INDICATION CIRCUITS** :

- 1.6.1 The control and indication circuit for each circuit breaker controlling transformer shall generally comprise the following :
  - a) Mimic diagram (one main bus and transfer bus scheme)
  - b) TCH relay & bulbs
  - c) Circuit Breaker Control switch.
  - d) "Trip Healthy" lamps.
  - e) Annunciators.
  - f) Breaker ON/OFF indication lamps.
  - g) Spring charge indication lamps.
- 1.6.2 The mimic diagram offered shall be at the level as indicated in the dimension of panel. Also the TNC switch for breaker control, semaphore for isolator and grounding switch are to be shown. Other equipments mimic indication such as transformer, voltage transformers etc., shall be represented by suitable symbols. Mimic should be for one main bus & one transfer bus arrangement.
- 1.6.3 The mimic diagram offered shall be of Azure blue shade 104 of IS-5.
- 1.6.4 Rotating disc type semaphore shall be used to indicate the position of each breaker. The position of the circuit breaker whether closed or open shall be indicated by semaphore indicator to be provided for this purpose. Along with pistol grip type

control switches red and green indicating lamps for ON/OFF indication shall be provided.

### 1.7 **ANNUNCIATION SYSTEM :**

- 1.7.1 Annunciation system shall be provided in the C&R panel by means of visual and audible alarm in order to draw the attention of the operator to the abnormal operating conditions or the operation of some protective devices. The annunciation equipment shall be suitable for operation on the voltages specified in this specification.
- 1.7.2 The annunciation shall be of visual and audible type. The visual annunciation shall be provided by annunciation facia, flush mounted on the top of the C&R panels. The audible alarm shall be provided by a hooter or bell.
- 1.7.3 The annunciator facia shall be provided with translucent plastic window with minimum size of 35 mm x 50 mm. The facia plates shall be engraved in black letter with respective inscriptions which will be furnished by CSPTCL. The size of the inscriptions to be engraved on each window shall not be less than 5 mm.
- 1.7.4 Long-life lamps shall be used. The lamp circuit shall include series resistor of adequate rating. The cover plate of the facia windows shall be flush with the panel and shall be capable of easy removal to facilitate replacement of lamps. The transparency of cover plates and wattage of the lamps provided in the facia windows shall be adequate to ensure clear visibility of the inscriptions
- 1.7.5 **TRIP AND NON TRIP** facia shall be differentiated. All trip shall have red colour and all non trip facia shall have white colour.
- 1.7.6 Sequence of operation of the annunciator shall be as follows:

S. No.	Alarm condition	Fault contact	Visual Annunciation	Audible Annunciation.
1.	Normal	Open	OFF	OFF
2	Abnormal	Close	Flashing	ON
3.	Acknowledge push button is pressed.	a) Close b) Open	Steady on Steady on	OFF OFF
4.	Reset push button is pressed.	a) Close b) Open	On Off	OFF OFF
5.	Lamp test push button pressed.	Open	Steady on	OFF

- 1.7.7 The annunciation system described above shall meet the following additional requirements :-
- The annunciation system shall be capable of catering to at least 100% simultaneous signals (of windows provided) at a time.
  - One self resetting push button shall be provided on each panel for testing the facia window lamps. Push buttons for testing flasher and audible alarm circuit of annunciation system and for testing the annunciation supply failure monitoring circuit shall also be provided. These testing circuits shall also be so connected that while test is being done it shall not prevent the registering of any new events in the annunciators that may land during the test.
  - One set each of the following push buttons shall be provided on each panel as shown in the front view drawing:
    - Reset push button for annunciation system.

- ii) Accept push button for annunciation system.
- d. The annunciations shall be repetitive type and shall be capable of registering the fleeting signal. Minimum duration of the fleeting signal registered by the system shall be 15 milli seconds.
- e. The annunciation shall be suitable for operation with normally open fault contacts which close on a fault. For fault contacts which open on a fault it shall be possible at site to change annunciators from “close to fault” to “ open to fault” and vice versa.
- f. In case of static annunciation scheme, special precaution shall be taken by bidder to ensure that spurious alarm condition does not appear due to influence of external electromagnetic/electrostatic interferences on the annunciation wiring and switching disturbances from the neighboring circuits within the panels.
- g. The annunciation scheme (wherever called for) offered shall be complete in all respects including annunciation relay, flasher relay test, accept and reset arrangement.
- h. The purchaser reserves the right to ask for a sample of annunciation system for approval, if so considered necessary from the successful bidder.

## 1.8 Instruments:

1.8.1 All indicating /recording instruments shall be type conforming to IS-722 and shall be of type and sizes specified under subsequent sections. They shall be capable of carrying their full load currents continuously without undue heating. They shall have long, clearly divided and indelibly marked scales of engraved or enameled metal and the pointers shall be of clean outline. The marking on the dials shall be restricted to the scale marking. All the indicating instrument shall be provided with non reflecting type glass fronts. Instruments connected with dual ratio current transformers shall be provided with dual ratio engraved on the dial.

1.8.2 The instruments shall not be damaged by the passage of fault current through the primary of their corresponding instrument transformers and approved means shall be provided for accuracy check without dismantling the instrument. All instruments and apparatus shall be back connected and all instrument cases shall be earthed as required.

### 1.8.3 Multi-Functional Transducer (MFT):

1 No. MFT shall be provided for each panel. The MFT should be accommodated in feeder panel and output signal of MFT shall be taken to RTU panel through 1.5 Sq mm multi strand copper wire (screened cable). The analog parameters of all feeders, transformers, bus voltages and frequency shall be measured through MFT and Breaker ON/ OFF indications shall be double point indication and isolator indication shall be single point indication and will be coupled to RTU through OPTO isolator print. The wiring of digital indication shall be done by 1.5 sq mm multi strand copper wire, Bus PT voltage and frequency signal shall be terminated to RTU panel. The MFT should have accuracy class of 0.2, 3 ph-4wire type with 2 no digital & 4 no.20mA analog outputs, should have USB & RS485 ports for communication and operating voltage 40-276V AC/DC. Necessary software interface shall also be provided.

## 1.9 Indicating lamps:

1.9.1 Indicating lamps shall be panel mounting group LED type with rear terminal connections. Lamps shall be provided with series connected resistors preferably built in the lamp assembly. Lamps shall have translucent lamp covers to diffuse lights

colored red, green, amber, clear white or blue as specified. The lamp cover shall be preferably of screwed type, unbreakable and molded from heat resisting material.

- 1.9.2 Group LED indicating lamps shall be provided when specified. The wattage of the Group LED lamp shall be 0-0.25 to 0.50 W.
- 1.9.3 Bulbs and lenses shall be interchangeable and easily replaceable from the front of the panel. Tools if required for replacing the bulbs and lenses shall also be included in the scope of supply.
- 1.9.4 The indicating lamps with resistors shall withstand 120% of rated voltage on a continuous basis and should also give sufficient illumination with – 20% auxiliary voltage condition.
- 1.9.5 Group LED long life type indicators shall be preferred over filament and neon type lamps.
- 1.10 **Drawing and literature:**  
The successful bidders shall have to supply at least 3 sets hard copy of drawing / literature for each panel containing of GA, Schematic & Wiring drawings illustrative pamphlets, literature, operation and maintenance instructions of the relay/Panels under his supply. The wire route schedule also be provided along with the wiring diagram. Also to submit soft copy of the above drawing /literature in 3 Nos of readable CD in PDF format. Ensure supply of one set of above drawing in A-3 size / literature also along with the panel, kept inside the panel.
- 1.11 Bill of material for 33 KV panels shall be submitted by the bidder based on the detailed technical requirements as stated in section II.

#### **1.12 PROTECTION SCHEME**

- 1.12.1 The protection schemes to be supplied under this contract are described in the following clauses
- 1.12.2 All the Numerical relays as specified should have latest IEC 61850 latest edition II or better version. None of the inbuilt feature of the relay shall be disabled. **Adequate no. of spare NO/NC auxiliary contact shall be provided in the relays (minimum 16nos Digital Input & 08 nos Digital outputs including watchdog contact).**

#### **PROTECTION SCHEME FOR 33KV TRANSFORMERS C&R PANEL:-**

- (i) **DC. Supply:-**The panel wiring should be made considering voltage source of 110V or 220 DC supply.
- ii) **NUMERICAL OVER CURRENT RELAY:-**  
The 4 element numerical over current /earth fault relay of 1A CT secondary and 110V/220V DC auxiliary voltage, inbuilt selectable directional/non directional feature with high set function with trip value & oscilloscopic recorder with date & time stamping, shall have option to choose desired relay characteristic. High set feature shall be invariably provided for instantaneous tripping for heavy faults. The date, time and magnitude of current recorded by the relay, shall be displayed in the window of the relay and readable without down loading. It shall be IEC61850 latest version compliant.  
The relay shall have inbuilt over voltage & LBB protections. **Adequate no. of spare NO/NC auxiliary contact shall be provided in the relays .**
- iii) **TRIP CIRCUIT SUPERVISION:-** Two nos. trip circuit supervision relays for monitoring healthiness of trip circuit shall be provided with indicating flags. **Adequate no. of spare NO/NC auxiliary contact shall be provided in the relays.**

- iv) **Over load protection**:- The overload relay shall be numerical/static type having current setting 0.5A to 1.5A in steps of 0.05A or continuous with settable time delay. The relay should have two independent, variable time delayed output contacts one for alarm / and the other, for trip. The trip o/p shall connected to a separate self reset type trip relay of having at least 4 No of O/P for tripping of outgoing 33 KV feeders for load shedding. The trip output timer contact shall be able to give variable time delay from 30 to 120 seconds. The relay shall be provided in series with Y phase metering CT only. **Adequate no. of spare NO/NC auxiliary contact shall be provided in the relays (minimum 06nos Digital Input & 08 nos Digital outputs including watchdog contact).**
- v) **DC Supervision relay** :- One no DC supervision relays with audible annunciation through AC supply should be provided. **Adequate no. of spare NO/NC auxiliary contact shall be provided in the relays .**

## 2. **ACCESSORIES** :-

- 2.1 **GENERAL** :-The bidders shall submit offer inclusive of all accessories such relay, switches, indicating instruments, panel lamps, energy meters and panel with complete wiring.
- 2.2 **ENERGY METERS**:- The C&R panels shall consist with SEMS make 3ph 4wire, solid state electronic trivector energy meter of 0.2s accuracy class rated for 110 V,1A. CTR will be 800/1A & PTR will be 33KV/110V. The meter should indicate instantaneous load parameter like Ampere, Volts, KW, KVA & KVAR. The energy meter should have the facility of recording load survey for minimum 60 days & tamper data and equipped with RS 485 port communication port with modbus protocol. The energy meter should be capable of recording 4 (four) quadrant KWH & KVARH energy.
- 2.3 **Digital Multi function Energy Meter**:- Digital Multi Function Energy Meter shall be provided on each panel to measure currents & voltage of all the 3 phases and MW ,MVAR, PF. etc. The multi function energy meter shall have CT ratio 800/1A & PT ratio 33 KV/110 V.

The specification of multifunction energy meter is :-P-N Voltage, Average P-N voltage, P-P voltage, (L1,L2,L3 and Average), Active/Reactive Current, Frequency, Power factor, Average Power factor, Active Power, Total Active Power, Reactive Power, Total Reactive Power, Apparent Power, Total Apparent Power, Active Total Import/ Export Energy. Active/Apparent Forwarded, Reactive Lag/Lead Forwarded, Phase Angle, Power On/Off Hours, Load On/Off Hours, Feeder Interruption Count(When Aux is also off), RPM with Freq and VUnb and IUnb, Modbus on RS485.

Accuracy class: 0.2s.

Ethernet pluggable port by separate detachable Module.

Calibration LED for accuracy test on site

Load Survey: 40 days for 6 parameters @ 30 min IP, Options for 15or 60 minute integration periods. **Type tested by NABL accredited Lab.**

3. **SWITCHES** :- Control and instrument switches shall be rotary operated type and clearly marked to show operating positions and suitable for flush mounting, with only switch front plate and operating handle projecting out.
- 3.1 The selection of operating handles for the different type of switches shall be as follows:

a)	Breaker control switches	Pistol grip, black
b)	Selector switches	Oval or knob black.
c)	Instrument switches	Round, Knurled, black.
d)	Protection transfer switch	Pistol grip lockable and black.

- 3.2 The TNC control switch of breaker shall be of spring return to neutral type. The control springs shall be strong and robust enough to prevent inadvertent operation due to light touch. Protection transfer switch shall be provided. The protection transfer switch shall be of lockable type and the key shall be able to remove only in normal position.
- 3.3 The contacts of all transfer switches shall be from open to close action or vice versa with snap action to minimize arcing. Contacts of switches shall be spring assisted and contact faces shall be with rivets of pure silver or silver alloy. Spring shall not be used as current carrying parts.
4. **POSITION INDICATORS** :- Position indicators of “semaphore” type shall be provided when specified as part of the mimic diagrams on panels for indicating the position of circuit breakers, isolator etc. The indicator shall be suitable for semi-flush mounting with only the front disc projecting out and with terminal connection from the rear. Their strips shall be of the same color and size as the associated mimic.
- 4.1 Position indicators shall be suitable for DC operation. When the supervised object is in the closed position, the pointer of the indicator shall take up a position in line with the mimic bus bars, and at right angles to them, when the object is in the open position. When the supply failure to the indicator occurs, the pointer shall take up an intermediate position to indicate the supply failure. The rating of the indicator shall not exceed 2.5 W. The position indicators shall withstand 120% of rated voltage on a continuous basis.
5. **RELAYS**:- Relays offered in this panel shall be type tested from a approved Govt. agency and the type test certificate so submitted shall not be more than 7 years old as on the date of NIT. The relay shall be contained in dust proof cases. All cases shall be mounted on the control and relay panels and the details of mounting shall be to the purchaser’s approval. Relays shall be of flush pattern as specified. **Adequate no. of spare NO/NC auxiliary contact shall be provided in the relays (minimum 16nos Digital Input & 08 nos. Digital outputs including watchdog contact).**
- 5.1 Each indication whether electrically or mechanically operated shall be capable to reset by hand without opening the relay case. On operation of protective relay, operation indicator shall appear permanently unless reseted.
- 5.2 All relays shall conform to the requirement of IS-3231 or other applicable approved standards. Relays shall be suitable for flush or semi flush mounting on the front with connections from the rear. Relays shall be rectangular in shape and shall be dust tight and vermin proof.
- 5.3 All protective relays shall be draw out or plug in type/ modular case with proper testing facilities. The testing facilities provided on the relays shall be specifically stated in the bid.
- 5.4 All relays shall be suitable for operation at 50 Hz 110V AC voltage, 1 Amp secondary current and for current operated relays of 1 amp CT secondary as specified in the specification. Auxiliary relays and timer shall be designed for the DC voltage specified and shall operate satisfactorily on (+)/(-) 20% of rated voltage. Voltage operated relays shall have adequate thermal capacity of continuous operation.

- 5.5 The protective relays shall be suitable for efficient and reliable operation of the protection scheme described in the specification. Necessary auxiliary relays and timer required for interlocking schemes for multiplying of contacts/suiting to contact duties of protective relays / monitoring of control supplies and circuits/ lockout relay monitoring circuits etc shall to be provided. All protective relays shall be provided with necessary no.of potential free contacts. Auxiliary relays and timers shall have pairs of contacts as required to complete the scheme. Relay case size shall be so chosen as not to introduce any limitations on the use of available contacts on the relay due to inadequacy of terminals. Paralleling of contacts, if any shall be done at the terminals on the casing of the relay.
- 5.6 All protective relays, auxiliary relays and timers except the lock out relays and interlocking relays, specified shall be provided with self reset type contacts. All protective relays and timers shall be provided with externally hand reset positive action operation indicators with inscription subject to owner's approval. All protective relays which do not have built-in-hand reset operation indicators shall have additional auxiliary relays with operating indicators (Flag relays) for this purpose.
- 5.7 Timers shall be of the solid state type. Pneumatic timers are not acceptable.
- 5.8 No relay which cuts the power circuit when the relay is de-energised shall be provided in the C&R panel.
- 5.9 All relays shall withstand a high voltage test for 2.5 KV 50 Hz.
- 5.10 Auxiliary seal-in-units provided on the protective relays shall preferably be of shunt reinforcement type. If series relays are used the following shall be strictly ensured:
- The operating time of the series seal-in-unit shall be sufficiently shorter than that of the trip coil or trip relay in series with which it operates to ensure definite operation of the flag indicator of the relay.
- 5.12 In order to minimize the electromagnetic effects, flag coils and DC relay operating coils shall be so placed in the circuit that they are not connected to the positive pole of the battery except through contacts which are normally open.
- 5.13 All the Numerical relays should have latest IEC61850 latest version. None of the in built feature of the relay shall be disable
6. **PRE TREATMENT AND PAINTING PROCESS** :- Process of painting of panels to be adopted by the bidders for all the panels included under this tender specification as given in annexure-I- enclosed. The sheet steel fabricated members shall be subjected to pre heat treatment processes before painting. This process shall be carried as indicated in Annexure-I. Please note the process indicated in Annexure-I should be strictly followed and confirmation may be made in your offer.
7. **DRAWING AND LITERATURE** :-The successful bidders shall have to supply atleast 3 sets of hard copy drawing in A-3 size properly binded /Literature per panel each containing of GA, Schematic & Wiring drawings illustrative pamphlets, literature, operation and maintenance instructions of the relay/Panels under his supply. Also to submit 3 Nos soft copy of the above drawing /literature in CD in PDF format.
8. **MAKE OF RELAYS & ACCESSORIES** :-The make of accessories should be strictly as per list of vendors in Annexure- II. Only one of the following make /models of relay shall be acceptable.



S.N	Numerical O/C & E/F relay	Annunciator relays (12 way)	Master tripping relay (4 NO+2NC) (Operating time less than 12ms)
	(As per our vendor list published in web site as on date of NIT ("www.cseb.gov.in" / CSPTCL / approved vendors))		
1	MICOM P143(Alstom/Schneider) or higher version	ALAN	Easun reyrolle
2	ABB REF620 or higher version	Bharani	Areva/Alstom
3	SIEMENS 7SJ66 or higher version	Minilec	ABB
4	ER CSC 211 or higher version	JVS	Siemens
5	GE F650 or higher version		
6	SEL 751A or higher version		

9. **GUARANTEED TECHNICAL PARTICULARS:-** Guaranteed technical particulars as called for shall be furnished along with the tender. While submitting technical particulars please ensure to stipulate very clearly the class of accuracy, (wherever necessary), current & voltage rating physical dimensions, weight make, model No. type etc. in order to give a clear picture of relays offered by you, along with literature/write up on relays offered. In absence of clear and specific confirmation, the offer are liable for rejection. Unless otherwise indicated, the panels shall be suitable for the auxiliary DC voltage of 110V or 220V DC.
10. **TECHNICAL QUESTIONNAIRE** :-At the end of this specification we have attached technical questionnaire. You are requested to reply various questions detailed out in the questionnaire although similar information is available elsewhere in your offer. Please note in case clear replies to our technical questionnaire are not furnished by you along with your quotation, the offers may be rejected.
11. **SCHEDULE OF REQUIREMENTS** :- The 33kv control and relay panels shall have the following instruments, relays and accessories.

**LISTING OF NUMERICAL PROTECTION SCHEME 33 KV CONTROL & RELAY PANELS FOR TRANSFORMERS :-**

33KV transformer panel shall have the following set of instruments ,relays & accessories

S.N	Protection scheme	Quantity	Remarks
1	The 4 element numerical over current /earth fault relay of 1A CT secondary and 110V/220V DC auxiliary voltage, inbuilt selectable directional/non directional feature with high set function with trip value & oscilloscopic recorder with date & time stamping, shall have option to choose desired relay characteristic. High set feature shall be invariably provided for instantaneous tripping for heavy faults. The date, time and magnitude of current recorded by the relay, shall be displayed in the window of the relay and readable without down loading. It shall be latest IEC 61850	1 No.	In built overvoltage & LBB protection.

	version compliant.		
2	Trip circuit supervision relay	2 No.	To monitor complete trip circuit of CB in off and ON conditions.
3	DC supervision relay with hooter	1 No.	With audible annunciation through AC supply
4	Over load protection (Micom P-143 or equivalent.)	1 No	- The overload relay shall be numerical type having current setting 0.5A to 1.5A in steps of 0.05A or continuous with settable time delay. The relay should have two independent, variable time delayed output contacts one for alarm / and the other for trip. The trip O/P shall be connected to a separate Self Reset type trip relay of having at least 4 No of O/P for tripping of outgoing 33 KV feeders for load shedding. The trip output timer shall be able to give a variable time delay from 30 sec-120 sec. The relay shall be provided in series with Y phase metering circuit.
5	Master trip relay with 4 NO+2 NC	1 No.	Hand reset, High speed trip relays.
6	LBB trip relay	1 No.	Hand reset, High speed trip relay.
7	Multifunction Energy Meter:	1 No	P-N Voltage, Average P-N voltage, P-P voltage, (L1,L2,L3 and Average), Active/Reactive Current, Frequency, Power factor, Average Power factor, Active Power, Total Active Power, Reactive Power, Total Reactive Power, Apparent Power, Total Apparent Power, Active Total Import/ Export Energy. Active/Apparent Forwarded, Reactive Lag/Lead Forwarded, Phase Angle, Power On/Off Hours, Load On/Off Hours, Feeder Interruption Count(When Aux is also off), RPM with Freq and VUnb and IUnb, Modbus on RS485. Accuracy class: 0.2s. Ethernet pluggable port by separate detachable Module. Calibration LED for accuracy test on site Load Survey: 40 days for 6 parameters @ 30 min IP, Options for 15or 60 minute integration period. Type tested by NABL accredited Lab.
8	Trip transfer switch	1 No.	Normal-inter-transfer positions
9	Circuit breaker control switch TNC switch(Trip close return to neutral type)	1 No.	Heavy duty
10	SEMs make energy meter 3 phase 4 wire export-import with load survey facility,RS485 port with TTB & with modbus protocol	1 No..	One number SEMS make 3 phase 4 wire Electronic solid state Tri-vector Exp/Imp meter of 0.2s class of accuracy having facility of Load survey of 15 minute block for minimum 60 days, Tamper recording, instantaneous load

			parameters like Ampere, volts, KW, KVA and KVAR, PF with RS 485 port communication & with modbus protocol.
11	HRC fuses	As required.	
12	Semaphore indicator for indication of circuit breaker position.	1 No.	
13	Trip circuit healthy indicating lamp	2 No.	
14	Circuit breaker ON/OFF indicating lamps.	2 No.	
15	Spring charge indicating lamp.	1 No.	
16	12 way facia annunciator with flicker relay complete with accept, reset and lamp test arrangement with necessary auxiliary relays and bell.	1 No.	
17	3 phase 4 wire heavy duty TTB with screw type CT shorting arrangement.	1 No.	
18	Multi-Functional Transducer (MFT):	1 No.	

## 12. TEST CERTIFICATE:-

Self attested copies of type test carried out at and issued from ISS/ IEC carried out **at &** issued by Govt. Standard laboratory /NABL accredited laboratory / ILAC accredited Laboratories shall be submitted along with the tender failing which the tender will be liable for rejection. The type test certificate of offered relays shall not be more than 7 years old from date of NIT. As per relevant/updated standards the required list of type test for offered relays are as under:-

- i) Insulation tests as per IEC 60255-5
- ii) High frequency disturbance test as per IEC 60255-4,61000-4 class-IV (not applicable for electromechanical relays)
- iii) Fast transient test as per IEC 1000-4, level-IV (not applicable for electromechanical relays)
- iv) Relay characteristics, performance and accuracy test as per IEC 60255
  - a. Steady state characteristics and operating time
  - b. Dynamic characteristics and operating time for current differential relay
  - c. Conformance test as per IEC 61850-10
- v) Tests for thermal and mechanical requirements as per IEC 60255-6
- vi) Contact performance test as per IEC 60255-0-20

## SECTION II (B)

### TECHNICAL SPECIFICATION OF 33 KV CONTROL & RELAY PANELS FOR FEEDERS

#### 1.1 Scope:

This section contains the technical specification for indoor control, indication, relay and metering panels associated with the outdoor switchgear for the various stations for 33 KV Feeders.

#### 1.2 Limits of contract:

The various control and relay panels and other requirements specified under this section shall be of complete in themselves with all main and auxiliary relays, fuse links switches, small wiring, labels terminal boards, earthing terminals foundation bolts, interior illumination cable glands etc wherever necessary.

**The supply and laying of the control and power cables interconnecting the various equipments is not covered under the specification. The cable terminating arrangements, viz., the cable hold support boxes, multicore cable glands, sealing ends for other types of cables that may be specified, shall however be included, where ever required for connection to the equipments under this contract and in the tender price. These shall be subject to our approval.**

#### 1.3 Climatic conditions:

1	Location	In the state of Chhattisgarh
2	Maximum Ambient Air Temperature	50 <sup>0</sup> C
3	Minimum Ambient Air Temperature	4 <sup>0</sup> C
4	Average daily Ambient Air Temp.	30 <sup>0</sup> C
5	Maximum relative humidity	95%(sometime approaches to saturation)
6	Average no. of thunderstorm days per annum	50
7	Average no. of rainy days per annum	90
8	Average annual rainfall	125 cm.
9	Months of tropical monsoon condition in the year.	June to October
10	Maximum wind pressure.	150 Kg/sq.m.
11	Altitude not exceeding	1000 meters
12	Seismic level (horizontal acceleration)	0.3 g

#### 1.4 Standard specification:

##### 1.4.1 Panel finish and colour:-

The exterior colour finish of panels shall be opeline green as per colour No. 275 of BS:381 C:1948. This colour finish shall be applied on the exterior steel works of the panels. The exterior opeline green paint finish shall be semi-glossy only and shall not be fully glossy. The interior of panels shall be painted with egg shell white.

##### Pretreatment & painting process:

Process of painting of panels to be followed by the bidders for all the panels included under this tender specification shall be as given in annexure-II enclosed. The sheet steel fabricated members shall be subjected to pre treatment processes before painting. This process shall be carried as indicated in Annexure-II. Please note the process indicated in Annexure-II should be strictly followed and confirmation may be made in your offer. This is very important.

##### 1.4.2 Protective relays and instruments:

The protective relays shall be manufactured tested and supplied with guaranteed particulars generally confirming to the latest issue of the following Indian Standard Specification:

i)	IS-3842 (Part I to V)	Application guides for electric relays for AC system.
ii)	IS-3231	Electric relays for power system protection.
iii)	IS-1885 (Part I & II)	Electric technical vocabulary- electrical relays and Electrical power system protection.
iv)	IS-1248, IS-2419	Indicating instruments.
v)	IS-722	Energy meters, control switches (LV switching devices for control and auxiliary circuits)
vi)	IS-5	Colour sheds.
vii)	IS-2705	Current transformers.
viii)	IS-3156	Voltage transformers.
ix)	IS-4237	General requirements for switchgear and control gear for voltage not exceeding 1KV.
x)	IS-375	Marking and arrangements for switchgear busbars, main connection and auxiliary wiring.
xi)	IS-8686	Specification for static protective relays.
xii)	IS-4483	Preferred panel cut out dimension for relays.

#### 1.4.3 Panel cut out and dimensions:

- i) The panels shall be simplex type (single feeder). The panels shall be fabricated of not less than 14 SWG sheet steel free from all surface defects. The panels shall have sufficient structural reinforcement to ensure a plain surface to limit vibration and to provide rigidity during dispatch and installation.
- ii) The Panels shall have the following dimensions:

#### 33 KV Feeder Panels:-

Type	Single
Height	2312 MM
Depth	560 mm.
Width	660 mm.
Thickness	3mm for load bearing side & 2mm for out side
Bus Mimic to be provided in the Panel at a height from the base of the Panel	i) Main Bus-1592 mm ii) Transfer Bus-1542 mm

- iii) Please also submit a G.A. drawing of each type of panel offered.
- iv) The control panels shall be floor mounting dead front sheets steel assemblies of unitized design.
- v) The panels shall be made in suitable sections as described elsewhere in the specification so that while mounting, the panels can be located side by side bolted together to form a compact unit.
- vi) Design material selection and workmanship shall be such as to present a peak appearance, outside and inside with no works of welds, reverts, screw or bolts head apparent from the exterior surfaced of the control boards.
- vii) The panels shall be vermin proof and suitable for IP 54 protection.

#### 1.4.4 Panel lighting:

- a. In each control and relay panel for interior illumination one LED bulb 12W operating at 230V 50 cycle with door operated switch shall be provided in the

corridor. The LED bulb shall be located at the ceiling and guarded with a protective cage.

- b. One No. 15 A, 3 pin receptable sockets with plug and switch shall be provided for each of the control panel of simplex C&R panels. The third pin of the socket shall be effectively earthed through the metallic structure. The socket shall be industrial grade control panel type complete with protective metallic cover.

#### 1.4.5 Auxiliary supply:

For each group of control boards, the purchaser will arrange to provide at one point only the following:

- a) (i) 230 V single phase 2 wire 50 C/s, neutral grounded AC supply.  
(ii) 110 V or 220 V DC power supply
- b) H.R.C. fuses shall be provided at each panel for both the A.C. and D.C. power supplies. Distribution of the same shall be utilized through fuses and links in such a way so that isolation of respective system is possible without affecting the rest of the system.
- c) All H.R.C. fuses and links shall be with holder, and the same shall be mounted on slant support and with identification labels.
- d) The H.R.C. fuses as per following details shall be provided:

S. No.	CIRCUIT	FUSE RATING 132 KV
1.	Circuit breaker closing circuit.	10A
2.	Trip circuit I & II	16 A
3.	Main protection	10 A
4.	Indication	4A
5.	Annunciation	4A
6.	P.T. Circuit	4 A

#### 1.4.6 Control wiring:

- a) The successful bidder shall furnish and install complete wiring upto the terminal block for the equipment, instrument devices mounted in the control boards strictly accordingly to the approved wiring diagram prepared by the bidder based on the approved schematic diagram.
- b) The wiring shall be completed in all respects so as to ensure proper functioning of control, protection and metering schemes.
- c) All spares contacts of relays and switches shall be wired upto the terminal blocks.
- d) Wiring shall be done with flexible heat resistant multistrand, PVC insulated copper wire. The conductor size shall be equivalent to 2.5 mm square for CT/ PT & trip circuits and 1.5 sq mm for control & indication circuits.
- e) Each wire shall be identified at both ends with wire designation number by PVC ferrule as per wiring diagram based on latest revision of IS-375 to denote the different circuit functions. The contractor shall take approval for the system of wire numbering.
- f) All wires termination shall be made with **Cu lugs** with proper crimping. Wires shall not be tapped between terminal points.
- g) All series connected devices and equipment shall be wired up in sequence. Loop-in Loop out system of wiring shall be avoided as far as possible and the common

buses shall normally be made through the terminal block for better reliability of testing and maintenance.

- h) Fuses and links shall be provided for isolation of individual circuit from bus bars without disturbing other circuits and equipments.
- i) The DC trip and DC voltage to main protective gear shall be segregated from those for special purposes. Each such group shall be fed through separate fuses,
- j) Since a number of wires will run from one point to another, it is desired that the support arrangement should be adequate and neat. The conventional method of bunching of wires should not be adopted since the same creates problems in case any wire is to be removed. The wires should be accommodated in a suitable plastic channels with sliding plastic cover, which may be mounted inside the panels suitably. Inspection/removal of wires should be possible by sliding the covers.
- k) Blank plastic channels should be provided by the sides of the panels to accommodate the incoming cables from switchyard through the cable glands.

#### 1.4.7 **Terminal blocks:**

- a) Multi-way stud type 10 A current carrying capacity terminal blocks complete with necessary binding nut and bolt , washers for wire connection and marking strip for circuit identification shall be furnished for terminating the panel wiring and outgoing cables. The terminal connectors shall be suitable to receive 2 x 2.5 sq. mm/ 2x4 sq. mm copper conductor of control cables
- b) Best quality sliding type, disconnect able terminal connectors may be used to CT & PT circuits .All other terminals shall of stud type.
- c) The terminal blocks shall be grouped according to the circuit functions and each terminal block group shall have at least 20% spare terminals.
- d) Not more than two wires shall be connected to any terminal or either side of the terminal block. If necessary, a number of terminals shall be jumpered together to provide the additional wiring points.
- e) Each terminal point shall be marked with designation obtained from the purchaser's schematic drawings.
- f) Adjacent rows of terminal blocks shall be spaced not less than 100 mm apart. They shall be mounted vertically at the sides of the cubicle and set obliquely towards the rear doors to give easy access to terminating end to enable ferrule number to be read without difficulty.
- g) The bottom of terminal blocks shall be spaced atleast 300 mm above the base plate for ease of termination.
- h) Separate test terminal block should be provided for the KWH meters to facilitate the testing and calibration of energy meters without disturbing the other circuits such as multifunction digital energy meter. The TTBs should be 3 phase, 4 wire with screw type with CT shorting arrangement.

#### 1.4.8 **Cable entry:**

- (a) The control board shall have provision of cable entry from the bottom. Necessary cable glands should also be provided.

- (b) Gland plate shall be supplied with factory made gland holes with suitable blanking arrangement for un used gland holes. The gland plate and doors shall be properly gasketted.
- (c) Rigid supports shall be provided along with terminal block for holding plastic channel. Suitable clamps may also be provided in plastic channel for holding cables.
- (d) The following quantities of cable glands with blanking plate shall be supplied fitted along with each panel:-

i)	For 8 core x 2.5 sq. mm 1.1 kV control cable	2 Nos.
ii)	For 4 core x 2.5 Sq. mm 1.1 KV Control cable	4 Nos.
iii)	For 12 core x 2.5 sq. mm 1.1 KV Control cable	2 Nos.

1.4.9 All the panels end doors shall be provided with suitable handle and lock .

## 1.5 Control & Relay Panels:

- 1.5.1 The Control and relay panel required at all substations of CSPTCL shall be Simplex, single feeder type. The control recording and indication apparatus and relays shall be mounted in the front panel. These shall be of the flush mounted type. The relays shall be mounted on the front side also and may be of the projecting/flush mounting type.
- 1.5.2 The labeling for the items shall be provided at the front side of control panel.
- 1.5.3 The panels shall be of uniform thickness and level sheet steel of minimum 14 SWG (3mm for load bearing sides & 2mm for other sides and 4 mm for detachable cable gland plates). The panel shall be designed to be self supporting. All control panels and switchgear cubicles shall be made absolutely vermin proof design.

## 1.6 Control & Indication circuits:-

- 1.6.1 The control and indication circuit for each circuit breaker controlling feeder shall generally comprise the following:
- Mimic diagram (Single main and transfer bus scheme)
  - Multifunction digital energy meter.
  - Circuit Breaker Control switch.
  - Alarm Test and Cancellation arrangement.
  - Breaker ON/OFF indication lamps.
  - Breaker Spring Charge indication lamp.
  - Trip circuit healthy lamps.
- 1.6.2 The mimic diagram offered shall be at the level as indicated in the dimension of panel. Also the TNC switch for breaker control semaphore for isolator and grounding. Painted type mimic diagram is not acceptable. Mimic should be for one Main bus & one transfer bus arrangement.
- 1.6.3 The mimic diagram offered shall be of Azure blue shade 104 of IS-5.
- 1.6.4 Rotating disc type semaphore shall be used to indicate the position of each breaker. The position of the circuit breaker whether closed or open shall be indicated by semaphore indicator to be provided for this purpose. Along with pistol grip type control switches red and green indicating lamps for ON/OFF indication shall be provided.

## 1.7 Annunciation system:-

- 1.7.1 Alarm annunciation system shall be provided for the control board by means of visual and audible alarm in order to draw the attention of the operator to the abnormal



operating conditions or the operation of some protective devices. The annunciation equipment shall be suitable for operation on the voltages specified in this specification.

- 1.7.2 The annunciation shall be of visual and audible type. The visual annunciation shall be provided by annunciation facia, mounted flush on the top of the control panels. The audible alarm shall be provided by alarm hooter or bell.
- 1.7.3 The annunciator facia shall be provided with translucent plastic window for alarm point with minimum size of 35 mm x 50 mm. The facia plates shall be engraved in black lettering with respective inscriptions which will be furnished. Alarm inscriptions shall be engraved on each window in not more than three lines and size of the lettering shall not be less than 5 mm.
- 1.7.4 Long-life lamps shall be used. The lamp circuit shall include series resistor of adequate rating. The cover plate of the facia windows shall be flush with the panel and shall be capable of easy removal to facilitate replacement of lamps. The transparency of cover plates and wattage of the lamps provided in the facia windows shall be adequate to ensure clear visibility of the inscriptions.
- 1.7.5 **TRIP AND NON-TRIP** facia shall be differentiated. All trip shall have red colour and all non trip facia shall have white colour.
- 1.7.6 Sequence of operation of the annunciator shall be as follows:

S. No.	Alarm condition	Fault contact	Visual Annunciation	Audible Annunciation
1	Normal	Open	OFF	OFF
2	Abnormal	Close	Flashing	ON
3.	Acknowledge push button is pressed	Close	Steady on	OFF
		Open	Steady on	OFF
4	Reset push button is pressed.	Close	On	OFF
		Open	Off	OFF
5	Lamp test push button pressed.	Open	Steady on	ON

- 1.7.7 The annunciation system described above shall meet the following additional requirements:
- The annunciation system shall be capable of catering to at least 100% simultaneous signals (of windows provided) at a time.
  - One self resetting push button shall be provided on each panel for testing the facia window lamps. Push buttons for testing flasher and audible alarm circuit of annunciation system and for testing the annunciation supply failure monitoring circuit shall also be provided. These testing circuits shall also be so connected that while test is being done it shall not prevent the registering of any new annunciation that may land during the test.  
One set each of the following push buttons shall be provided on each panel as shown in the front view drawing:
    - Reset push button for annunciation system.
    - Accept push button for annunciation system.
  - The annunciations shall be repetitive type and shall be capable of registering the fleeting signal. Minimum duration of the fleeting signal registered by the system shall be 15 milli seconds.

- d) The annunciation shall be suitable for operation with normally open contacts which close on a fault. For contacts which open on a fault it shall be possible at site to change annunciators from “close to fault” to “open to fault” and vice versa.
- e) In case of static annunciation scheme, special precaution shall be taken by bidder to ensure that spurious alarm condition does not appear due to influence of external electromagnetic/electrostatic interferences on the annunciation wiring and switching disturbances from the neighbouring circuits within the panels.
- f) The annunciation scheme (wherever called for) offered shall be complete in all respects including annunciation relay, flasher relay test, accept and reset arrangement.
- g) The purchaser reserves the right to ask for a sample of annunciation system for approval, if so considered necessary from the successful bidder.

## 1.8 Instruments:

1.8.1 All indicating/recording instruments shall be conforming to IS-722 and shall be of type and sizes specified under subsequent sections. They shall be capable of carrying their full load currents continuously without undue heating. They shall have long, clearly divided and indelibly marked scales of engraved or enamelled metal and the pointers shall be of clean outline. The marking on the dials shall be restricted to the scale marking. All the indicating instrument shall be provided with non reflecting type glass fronts. Instruments connected with dual ratio current transformers shall be provided with dual ratio engraved on the dial.

1.8.2 The instruments shall not be damaged by the passage of fault current through the primary of their corresponding instrument transformers and approved means shall be provided for zero accuracy test without dismantling the instrument. All instruments and apparatus shall be back connected and all instrument cases shall be earthed as required. All the indicating instruments shall be of accuracy class 1.0.

### 1.8.3 Multi-Functional Transducer (MFT):

1 No. MFT shall be provided for each panel. The MFT should be accommodated in feeder panel and output signal of MFT shall be taken to RTU panel through 1.5 Sq mm multi strand copper wire (screened cable). The analog parameters of all feeders, transformers, bus voltages and frequency shall be measured through MFT and Breaker ON/ OFF indications shall be double point indication and isolator indication shall be single point indication and will be coupled to RTU through OPTO isolator print. The wiring of digital indication shall be done by 1.5 sq mm multi strand copper wire, Bus PT voltage and frequency signal shall be terminated to RTU panel. The MFT should have accuracy class of 0.2, 3 ph-4-wire type with 2 no digital & 4 no.20mA analog outputs, should have USB & RS485 ports for communication and operating voltage 40-276V AC/DC. Necessary software interface shall also be provided.

## 1.9 Switches:

1.9.1 Control and instrument switches shall be rotary type with escutcheon plates clearly marked to show operating position and circuit designation plates and suitable for flush mounting with only switch front plate and operating handle projecting out. Handles of different shapes and suitable inscriptions on switches shall be provided as an aid to switch identification.

1.9.2 The selection of operating handles for the different type of switches shall be as follows:

a)	Breaker control switches	Pistol grip, black
----	--------------------------	--------------------

1.9.3 The control switch of breaker shall be return to neutral type. The spring return type shall be provided. The control springs shall be strong and robust enough to prevent inadvertent operation due to light touch. The spring return type switch shall have

spring return from close and trip positions to after close and after trip position respectively.

### 1.10 Indicating lamps:

1.10.1 Indicating lamps shall be panel mounting group LED type with rear terminal connections. Lamps shall be provided with series connected resistors preferably built in the lamp assembly. Lamps shall have translucent lamp covers to diffuse lights coloured red, green, amber, clear white or blue as specified. The lamp cover shall be preferably of screwed type, unbreakable and moulded from heat resisting material.

1.10.2 Group LED indicating lamps shall be provided when specified. The wattage of the group LED lamp shall be 0-0.25 to 0.50 W.

1.10.3 Bulbs and lenses shall be interchangeable and easily replaceable from the front of the panel. Tools if required for replacing the bulbs and lenses shall also be included in the scope of supply.

1.10.4 The indicating lamps with resistors shall withstand 120% of rated voltage on a continuous basis and should also give sufficient illumination with – 20% auxiliary voltage condition.

1.10.5 Group LED long life type indicators shall be preferred over filament and neon type lamps.

### 1.11 Drawing and literature:

The successful bidders shall have to supply at least 3 sets hard copy of drawing in A-3 size / literature for each panel containing of GA, Schematic & Wiring drawings illustrative pamphlets, literature, operation and maintenance instructions of the relay/Panels under his supply. The wire route schedule also be provided along with the wiring diagram. Also to submit soft copy of the above drawing /literature in 3 Nos of readable CD in PDF format. Ensure supply of one set of above drawing / literature along with the panel, kept inside the panel.

1.12 Bill of material for 33 KV panels shall be submitted by the bidder based on the detailed technical requirements as stated in section II.

### 1.13 PROTECTION SCHEME:

1.13.1 The protection schemes to be supplied under this contract shall cover the Feeder panel for 33 KV System. The protection schemes are described in the following clauses.

1.13.2 All the Numerical relays as specified should have latest IEC 61850 version. None of the inbuilt feature of the relay shall be disabled. **Adequate no. of spare NO/NC auxiliary contact shall be provided in the relays (minimum 16nos Digital Input & 08 nos Digital outputs including watchdog contact).**

### (A) TECHNICAL SPECIFICATIONS OF 33 KV FEEDER CONTROL AND RELAY PANELS

(i) **DC. Supply:-**The panel wiring should be made considering voltage source of 110V or 220 DC supply.

(ii) Panel shall be provided with semaphore indications for CB on-off. Separate semaphore shall be needed to provide to indicate the positions of isolators/earth switch. Separate lamp indications shall be provided to indicate on-off CB positions.

(iv) SEMS make 0.2s class, electronic 4 quadrant, import-export, 3phase 4wire, trivector energy meters shall be provided with suitable TTB on the front panel. The energy

meters shall indicate instantaneous parameters like kW, kva, kvar, pf, current, voltage etc. The energy meter shall have 15 minutes load survey for kW & KVA for a minimum period of 60 days. The meter should have RS 485 communication port with modbus protocol.

- (i) **Digital Multi function Energy Meter:-** Digital Multi Function Energy Meter shall be provided on each panel to measure currents & voltage of all the 3 phases and MW, MVAR, PF. etc. The multi function energy meter shall have CT ratio 400/1A & PT ratio 33 KV/110 V.
- (vi) All the CT terminal connectors shall be of best quality sliding type connectors suitable size. 2.5mm square flexible 1100V grade copper wires shall be used. The colour of wires shall be R Y B and black for easy identification. The 'C' series ferrules shall be used for back up O/C&E/F CT circuits, and 'D' series ferrules shall be used for metering CT circuits.
- (vii) All the control, tripping and indications circuit wiring shall be of 1.5 mm<sup>2</sup> grey wires of 1100 V grade flexible best quality copper wires. All the wires shall be ferruled systematically without repetition. Control protection wires shall be provided with 'K' series ferrules and alarm /indications circuits shall be provided with 'L' series ferrules. All the terminal connectors shall be of nut & bolt of 10 Sq mm Size, except of CT-PT circuits. All the wires shall be provided with insulated copper lugs properly crimped. The ferrules used shall be of best quality, having legible letters/numbers.
- (viii) **Numerical Over current & E/F Relay:-** The 4 element numerical over current /earth fault relay of 1A CT secondary and 110V/220V DC auxiliary voltage, inbuilt selectable directional/non directional feature with high set function with trip value & oscilloscopic recorder with date & time stamping, shall have option to choose desired relay characteristic. High set feature shall be invariably provided for instantaneous tripping for heavy faults. The date, time and magnitude of current recorded by the relay, shall be displayed in the window of the relay and readable without down loading. It shall be latest IEC 61850 version compliant. **Adequate no. of spare NO/NC auxiliary contact shall be provided in the relays(minimum 16nos Digital Input & 08 nos Digital outputs including watchdog contact).**
- NOTE:- The bidder shall provide the software required for setting and data extraction of the numerical relays / software for analysis of disturbance recorded by the relay to be supplied with the panels, without any extra cost.**
- (ix) **DC supervision relay:** - One no DC supervision relay with audible annunciation through AC supply should be provided. **Adequate no. of spare NO/NC auxiliary contact shall be provided in the relays .**
- (x) **Trip relays:-** Two nos. high speed hand reset type tripping relay shall be provided with adequate no. of contacts for tripping through trip coil 1 and trip coil 2. The tripping relays shall have NC contacts for CB close inter locks. The operating time of trip relays shall not exceed 12 ms. Contactors & aux relays shall not be acceptable as trip relays. The input to the coil of trip relay shall get disconnected as soon as relay operates. **Adequate no. of spare NO/NC auxiliary contact shall be provided in the relays .**
- (xi) **Trip circuit Supervision:-** Two nos trip circuit supervisory relays for monitoring the healthiness of trip circuit shall be provided with indicating flags. **Adequate no. of spare NO/NC auxiliary contact shall be provided in the relays .**
- (xii) **Minimum 06 way facia annunciator** shall be provided.

- (xiii) . The C&R panel shall be provided with necessary wiring suitable to single phase 230V AC supply for internal lighting and cubical heaters.. Necessary HRC fuse protection shall be provided on phase side and solid fuse link on the neutral side. A separate TB shall be used for 230V circuits. ‘H’ series ferrules shall be used for the a.c. supply circuits.
- (xiv). The panel shall be provided an earthing bar of copper of adequate size to connect the earth wires of various relays, CT secondary earthing etc. Necessary holes shall be provided to interconnect the earthing bar to the adjacent panels. Green colored flexible copper wire of size 2.5mm square shall be used for earthing of relays/equipments/ CT star point etc.
- (xv) **Wiring in the panel** :The CT circuit wires should be color coded i.e. red, yellow, blue and black for three phases and neutral. The d.c. and control wires should be grey. The cable size shall be 2.5 mm<sup>2</sup> for CT & PT and 1.5 mm<sup>2</sup> for control circuit. However, **for trip circuit, white wires** should be used & it shall be 2.5 Sq.mm.
- (xvi) **MAKE AND MODELS OF RELAY ACCEPTABLE**

The make of accessories should be strictly as per list of vendors in Annexure- II. Only one of the following make /models of relay shall be acceptable.

S. N	Numerical O/C & E/F relay	Master tripping relay (4 NO+2NC.	Annunciator relays (6 way)
(As per our vendor list published in web site as on date of NIT (“www.cseb.gov.in” / CSPTCL / approved vendors))			
1	MICOM P143 or higher version(Alstom/Schneider)	Easun reyrolle	ALAN
2	ABB REF 620 or higher version	Areva/Alstom	JVS
3	SIEMENS 7SJ66 or higher version	ABB	Bharani
4	ER CSC 211 or higher version	Siemens	Minilec
5	GE F60 or higher version		
6	SEL 751A or higher version		

- (xvii). **METERING AND CONTROL:-**
- a) The panel meters shall be digital type, 72x144mm size of class-I accuracy. The CT& PT ratio shall be furnished at the time of drawing approval.
- b) A 6-window facia annunciator with following inscription shall be provided on the front with audible DC alarm bell.

S. No.	Name of Annunciation	Initiation From
1	Over Current & E/F relay	Alarm contact of over current & E/F relay
2	Trip Circuit-1 Fail	TCH Relay Coil 1
3	Trip Circuit-2 Fail	TCH Relay Coil 2.
4	IDMT Relay faulty	From Numerical IDMT Relay Supervision Contact
5	High set operated	---
6	LBB operated	---

- e) Breaker indication:- Separate breaker ON – OFF lamp indication shall be provided in addition to CB semaphore indications.

- f) Mimic diagram:- It is not necessary for the manufacturer to match the other details of the switch yard. The standard mimic diagram of single main and transfer bus is sufficient.
- g) CT cores:- The 33 KV CTs for the panel having ratio of 200-400/1 with 2 Nos. secondary cores. One core of class PS class for O/C & E/F relay and the 2<sup>nd</sup> core shall be for metering.

11. **SCHEDULE OF REQUIREMENTS** :- The 33KV control and relay feeder panels shall have the following instruments, relays and accessories.

### LISTING OF NUMERICAL PROTECTION SCHEME

#### (A) 33 KV CONTROL & RELAY PANELS FOR FEEDER PANEL:-

33KV Feeder panel shall have the following set of instruments ,relays & accessories

S. N	Protection scheme	Qty.	Remarks
1	The 4 element numerical over current /earth fault relay of 1A CT secondary and 110V/220V DC auxiliary voltage, inbuilt selectable directional/non directional feature with high set function with trip value & oscilloscopic recorder with date & time stamping, shall have option to choose desired relay characteristic. High set feature shall be invariably provided for instantaneous tripping for heavy faults. The date, time and magnitude of current recorded by the relay, shall be displayed in the window of the relay and readable without down loading. It shall be latest IEC 61850 version compliant.	1 No.	The relay shall have inbuilt feature of LBB and two stage under frequency function.
2	Trip circuit supervision relay	2 No.	To monitor trip circuit of CB in On and OFF conditions.
3	DC supervision relay with hooter	1 No.	With audible annunciation through AC supply
4	Master trip relay with 4 NO+2 NC	1 No.	Hand reset, High speed trip relays.
5	LBB trip relay	1 No.	Hand reset, High speed trip relays
6	Multifunction Energy Meter:	1 No.	P-N Voltage, Average P-N voltage, P-P voltage, (L1,L2,L3 and Average), Active/Reactive Current, Frequency, Power factor, Average Power factor, Active Power, Total Active Power, Reactive Power, Total Reactive Power, Apparent Power, Total Apparent Power, Active Total Import/ Export Energy. Active/Apparent Forwarded, Reactive Lag/Lead Forwarded, Phase Angle, Power On/Off Hours, Load On/Off Hours, Feeder Interruption Count(When Aux is also off), RPM with Freq and VUnb and IUnb, Modbus on RS485. Accuracy class: 0.2s. Ethernet pluggable port by separate detachable Module.

			Calibration LED for accuracy test on site Load Survey: 40 days for 6 parameters @ 30 min IP, Options for 15or 60 minute integration period. Type tested by NABL accredited Lab.
7	Circuit breaker control switch TNC switch(Trip close return to neutral type)	1 No.	
8	SEMs make energy meter 3 phase 4 wire export-import with load survey facility,RS485 port with TTB with mod bus protocol	1 No.	One number SEMS make 3 phase 4 wire Electronic solid state Tri-vector Exp/Imp meter of 0.2s class of accuracy having facility of Load survey of 15 minute block for a minimum 60 days, Tamper recording, instantaneous load parameters like Ampere, volts, KW, KVA and KVAR, PF with RS 485 port communication & with modbus protocol
9	HRC fuses	As required	
10	Semaphore indicator for indication of circuit breaker/isolator/earth switch position.	5 No.	
11	Trip circuit healthy indicating lamp	2 No.	
12	Circuit breaker ON/OFF indicating lamps.	2 No.	
13	Spring charge indicating lamps	1 No.	
14	6 way facia annunciator with flicker relay complete with accept, reset and lamp test arrangement with bell.	1 No.	
15	3 phase 4 wire heavy duty TTB with screw type CT shorting arrangement.	1 No.	
16	Multi Functional Transducer	1 No.	

## SCHEDULE-I

### SCHEDULE OF PRICES AND QUANTITY

Sl No.	Particulars	Qty Nos	Unit Ex-works prices incl. of packing & forwarding in Rs.	Unit Freight Charges	GST on Ex-works and freight Charges @ %	Unit F.O.R. Destn. Price including Ex works, GST and Fright
1	2	3	4	5	6=(4+5)*GST %	7=(4+5+6)
1.	33KV simplex control & Relay panel for <b>Transformer</b> with all relays & accessories as per tech. spec. under section-II.	47				
2.	33KV simplex control & Relay panel for <b>Feeder</b> with all relays & accessories as per tech. spec. under section-II.	97				

**NOTE-**

- (i) The prices offered shall be on firm rate basis.
- (ii) Only statutory variation shall be paid within contractual delivery period.
- (iii) The unpriced copy of above schedule is to be submitted alongwith TC bid.
- (iv) The rates will be quoted through online e bidding portal ( SAP SRM system) only. Price schedule duly filled in hard copy is not required.

**Signature & Seal of Bidder**



**SCHEDULE –II****GUARANTEED TECHNICAL PARTICULARS**

<b>S.No</b>	<b>PARTICULARS</b>	
1	O/C, E/F relays(for each)	
	(i) Make & type desig.	
	(ii) Rating & burden	
	(iii) PSM settings	
	(iv) TLS settings	
	(v) No. Of contacts	
	(vi) Rating of contacts	
	(vii) Any other spec.	
2	Master trip relay	
	(i) Make & type desig.	
	(ii) Rating & burden	
	(iii) settings	
	(v) No. Of contacts	
	(vi) Rating of contacts	
	(vii) Any other spec.	
3	Trip/Aux. relays	
	(i) Make & type desig.	
	(ii) Rating & burden	
	(iii) settings	
	(v) No. Of contacts	
	(vi) Rating of contacts	
	(vii) Any other spec.	
4	TCH relays	
	(i) Make & type desig.	
	(ii) Rating & burden	
	(iii) settings	
	(v) No. Of contacts	
	(vi) Rating of contacts	
	(vii) Any other spec.	
5	Annunciator relays	
	(i) Make & type desig.	
	(ii) Rating & burden	
	(iii) whether microprocessor based design	
	(v) No. Of contacts	
	(vi) Rating of contacts	
	(vii) No. Of windows	
6	Digital multifunction Energy Meter	
	(i) Make & type	
	(ii) Size	
	(iii) Ratings	
7	Energy meter	
	(i) Make & type	
	(ii) Size	
	(iii) Ratings	

	(iv) Whether static	
	(v) Load survey in No. of days in 15 minutes time block.	
8	Indication lamps	
	(i) Make & type	
	(ii) Type of lamp (LED/Filament)	
	(iii) Wattage	
	(iv) Whether resistor internal	
	(v) Any other spec	
9	Push Buttons	
	(i) Make & type	
	(ii) Contact type (Momentary/ maintained)	
	(iii) No. Of NO/NC cont.	
	(iv) Rating of contacts	
	(v) Colour	
	(vi) Any other spec.	
10	Switches	
	(i) Make & type	
	(ii) Rating	
	(iii) No. Of positions	
	(iv) no. Of contacts	
	(v) Any other spec.	
11	TTB	
	(i) Make & type	
	(ii) Whether 3-ph, 4-wire	
	(iii) CT shorting arrangement	
	(iv) Any other spec.	
12	<b>Multi Functional Transducer(MFT)</b>	
	(i) Make & type	

Note:- The particulars of any of the items not covered above may also be mentioned

SIGNATURE OF BIDDER WITH SEAL

**SCHEDULE – III****SCHEDULE OF TENDER'S EXPERIENCE**

Bidder shall furnish here a list of similar jobs executed by him. A reference may be made by the purchase to them in order be considers such a reference necessary.

S.No.	Name & Description of work. (adequate details to be given certifying the work done)	Order No. & date	Period & date of supply	Client or order placing authority	Person to whom reference to be made

Date-  
Place-

SIGNATURE OF BIDDER  
NAME  
DESIGNATION  
(SEAL)

**SCHEDULE- IV****Details of Manufacturing****Name of the manufacturer, place of manufacturer, testing and inspection.**

S.No.	Description	Manufacturer	Place of manufacturer	Date of testing and inspection

Date  
PlaceSIGNATURE OF BIDDER  
NAME  
DESIGNATION  
(SEAL)

**SCHEDULE-V**  
**COMMERCIAL INFORMATION**

Strike-off, whichever is not applicable

1.i)	Whether purchased from this office or downloaded?	Yes/No
ii)	If down loaded, whether tender cost is furnished? Details of MICR DD for tender cost	Yes/No
iii)	Amount of EMD	Rs.
iv)	Earnest Money details & GST Number & registration certificate	Bank draft/ Banker's cheque/ Cash with Manager (RAO :HQ), CSPTCL, Raipur. GST Number & Registration certificate Enclosed
v)	If exempted, state whether bidder is	SSI Unit of CG/ Small scale unit registered with NSIC/ Fully owned State Central Govt. Unit.
vi)	Reference of documentary evidence regarding exemption enclosed	Yes/ No
2.	Whether the offer is valid for 180 days from the date of opening of commercial/technical bid	Yes/ No (If no, state validity period)
3.	State whether the quoted prices are Firm	Yes/ No
4.	Rate of GST(goods and service tax)	
5.	PAYMENT TERMS:- Whether CSPTCL's terms of payment is acceptable to the bidder .	Yes/ No
6.	DELIVERY PERIOD:- Whether CSPTCL's terms of Delivery is acceptable to the bidder.	Yes/ No
7.	PENALTY CLAUSE Whether agreeable to CSPTCL's Penalty clause	Yes/ No
8.	GUARANTEE PERIOD :- Whether agreed to CSPTCL's guarantee period.	Yes/ No
9.	SECURITY DEPOSIT	Yes/ No
a.	Whether agreed to CSPTCL's Security deposit @ 10% of value of order for satisfactory execution of the order and to cover guarantee period	
b.	If not, indicate deviation specifically	
10.	EXTENSION ORDER:- Whether you are agreeable to accept extension order for 50% of qty. on the same rates, terms & condition if any extension order is placed within 6 months from the date of placement of detailed order.	Yes/ No
11.	Please mention whether rates offered are	Yes/ No

	applicable for part quantities.	
12.	Mention Turn over of the firm for last three years (Enclose balance sheets in support)	
(a)	2015-16	
(b)	2016-17	
(c)	2017-18	
(d)	2018-19	
(e)	2019-20	
13.	C.A. audited of net worth for the last three financial years submitted.	Yes/No
14.	Year of start of manufacture of offered equipment/ material.	
15.	Whether submitted attested copy of undertaking duly certified by CA stating that a) All interest payment obligations on outstanding debentures have been discharged and no such payment as on 31.12.2020 is/was outstanding / overdue. b) Company is presently not in default in repayment of bank loan and has not been taken up for CDR/SD.	Yes/ No
16	Whether submitted certificate/declaration/ undertaking that “while quoting rate of all items, you have taken into consideration “Input Tax Credit” available to you on all input material/ services.”	Yes/ No
17	Whether submitted Pre – contract Integrity pact	Yes/ No

Place:-

Date

SIGNATURE OF BIDDER  
NAME IN FULL & COMPANY'S SEAL

**NOTE:- Scanned copy of this schedule is to be uploaded in e-bidding portal.**

**SCHEDULE – VI (A)****SCHEDULE OF COMMERCIAL DEVIATIONS**

We/I have carefully gone through the Commercial requirements of specification and the General condition of contract and we/I have satisfied ourselves/myself and hereby confirm that our/my offer strictly conforms to the requirements of commercial specification and General conditions of contract except for the deviations, which are given below:-

S.No.	DESCRIPTIONS & CLAUSE NO. OF THE SPECIFICATION & PAGE NUMBER	STIPULATION IN SPECIFICATION	DEVIATION OFFERED.	REMARKS REGARDING JUSTIFICATION OF THE DEVIATION
1	2	3	4	5

Except for aforesaid deviations, the entire order, if placed on us, shall be executed in accordance with your specification and any other conditions, variation/deviation etc. if found elsewhere in our offer should not be given any considerations while finalising the tender.

**NOTE:- Scanned copy of this schedule is to be uploaded in e-bidding portal:-**

**Date-  
Place-**

**SIGNATURE OF BIDDER  
NAME  
DESIGNATION  
(SEAL)**

**SCHEDULE-VI (B)****SCHEDULE OF TECHNICAL DEVIATIONS**

We/I have carefully gone through the Technical specification and the General condition of contract and we/I have satisfied ourselves/myself and hereby confirm that our/my offer strictly conforms to the requirements of technical specification and General conditions of contract except for the deviations, which are given below:-

S.No.	DESCRIPTIONS & CLAUSE NO. OF THE SPECIFICATION & PAGE NUMBER	STIPULATION IN SPECIFICATION	DEVIATION OFFERED.	REMARKS REGARDING JUSTIFICATION OF THE DEVIATION
1	2	3	4	5

Except for aforesaid deviations, the entire order, if placed on us, shall be executed in accordance with your specification and any other conditions, variation/deviation etc. if found elsewhere in our offer should not be given any considerations while finalising the tender.

**NOTE:- Scanned copy of this schedule is to be uploaded in e-bidding portal:-**

**Date**  
**Place**

**SIGNATURE OF BIDDER**  
**NAME**  
**DESIGNATION**  
**(SEAL)**



**SCHEDULE-VII****TECHNICAL INFORMATION****Strike-off, whichever is not applicable****(ii) Separate sheet should be used, wherever necessary.**

1	Whether material offered is exactly as per the technical specification	Yes/No
2	Whether the copies of orders received during last 5 years from other State Electricity Board/NTPC & other organization for similar materials enclosed	Yes/No, give details
3	Whether performance certificate from such organization regarding supplies enclosed	Yes/No, give details
4	Whether pamphlets/technical details literatures alongwith drawing etc. Furnished with the offer	Yes/no, give details
5	Whether the bidder agrees to furnish materials test certificates in respect of chemical composition and physical properties from Govt./Govt. Approved Lab. With each batch of supplies	Yes/No
6	Whether the bidder has furnished details of manufacturing equipments and short history of plant	Yes/No, give details
7	Whether details of manufacturing process furnished with offer	Yes/No, give details
8 (a)	Whether all testing facilities are available, if so, give details and in case of non-availability of facilities indicate approved lab. Available in surrounding areas where tests are proposed to be conducted	Yes/No, give details
(b)	Whether you agree for inspection by CSPTCL's representative prior to dispatch and bear the testing charges for all tests as per relevant standards	Yes/no
9	Mention in brief the type test reports enclosed name of test, agency at which testing done, date of testing.	
10	GA drawing furnished with the offer	Yes/no
11	Confirmed that non of the in built feature of numerical relay has been disabled.	

Date  
PlaceSIGNATURE OF BIDDER  
NAME  
DESIGNATION  
(SEAL)

**SCHEDULE-VIII**  
**GENERAL INFORMATION**

The bidders shall furnish general information in the following format:-

1. Name of the Firm -
2. Offered Equipment OEM detail-
  - (i) Make-
  - (ii) Model No.-
  - (iii) Country of Origin -
3. Manufacturer Works Address-
4. Head Office address & Phone No.-
5. Marketing Office address & Phone No.-
6. Service Centre address in India & Phone No.-  
(Separate for each Instrument)
7. Contact Person
8. Mobile No. of contact person-
9. Telephone No. Residence-
10. Fax No.-
11. E-mail:-
12. PF / ESIC Registration No.-

**Dated-**

**Name and seal of the tendering Company**

**Place-**

**ANNEXURE-I****PRE-TREATMENT AND PAINTING PROCESS**

1. The sheet steel fabricated members shall be subjected to pre-treatment process before painting. The process shall be carried out as under. The process can broadly be divided as 'Metal Treatment and painting.

**1.1 METAL TREATMENT :**

1.1.1 DEGREASING : This can be achieved either immersing in not alkaline degreasing bath or in hot dry chlorothelence solution. In case degreasing is done by alkaline bath with cold water thoroughly.

1.1.2 PICKLING: This is to remove rust and metal scales. Immersing in diluted sulphuric acid (approximately 20%) at nearly 60 deg. Centigrade unit scale and rust are totally removed.

1.1.3 Rinse in cold water in two tanks to remove traces of acids.

1.1.4 Treat with Phosphoric acid base neutraliser for removal of chlorine from the above acid pickling and again wash with running water.

1.1.5 PHOSPHATING :- Immerse in grenodine 'zinc phosphate solution for about 20 minutes at 80 to 90°C. The uniform phosphate coating of 4 to 5 gms per sq. meter shall be achieved.

1.1.6 Swill in cold water.

1.1.7 Rinse in Deorylyte bath at 70 to 80 °C to neutralise any traces of salts.

1.1.8 Seal the above phosphate coating with hot/dilute choromoto solution.

1.1.9 Dry with compressed air.

**PAINTING :**

2.1 Primer spray one coat wet on wet specially developed 'High lusture' zinc chromote primer and stove at 150 deg. Centigrade to 160 deg. Centigrade for 25 to 30 minutes. Alternative re-oxide primer with zinc chromate contents may be used. However, former process is preferred.

2.2 Rubbing and putting : Apply putty to fill up the scars if any to present smooth surface and stove 15 to 20 minutes. Apply putty several times to get the perfectly smooth finish.

2.3 Surfacing Sand down with mechanical abrasive and stove for 20 minutes.

2.4 Primer : Spray second coat of primer as per (i) above or grey primer susrfacer wet on wet and stove for 20 to 40 minutes at 150 deg. Centigrade.

2.5 Finish paint : Rubbing down dry and spray first coat of synthetic enamel finish paint wet on wet and stove for 30 minutes.

2.6 Surfacing : Sand down or rub dry to prepare for final finish spray. Coats of synthetic enamel finish paint wet on wet and stove it at 150 deg centigrade for 30 minutes.

**NOTE :** i) Necessary stiffeners may be welded between large cut duts to provide rigid before painting process.

ii) Painting process shall be done within 24 hrs. of completion of .

iii) Small coating paint shall be supplied alongwith equipment for touching up at site.

**ANNEXURE-II****LIST OF VENDORS FOR ACCESSORIES**

<b>Sl.No.</b>	<b>PARTICULARS</b>	<b>MAKE</b>
<b>1.</b>	<b>Numerical O/C &amp; E/F relay</b>	<b>As per our vendor list published in web site as on date of NIT (“www.cspc.co.in” / CSPTCL / approved vendors).</b>
<b>2.</b>	<b>Master tripping relay</b>	<b>ER/Areva(Alstom)/ABB/Siemens</b>
<b>3.</b>	<b>Panel ammeters, voltmeters, MW, MVAR meters</b>	<b>AE/ Rishabh/ IMP/ MECO</b>
<b>4.</b>	<b>Annunciator relay</b>	<b>As per our vendor list published in web site as on date of NIT (“www.csepc.co.in” / CSPTCL / approved vendors).</b>
<b>5.</b>	<b>Control switch</b>	<b>Kaycee/ AREVA/ Switron</b>
<b>6.</b>	<b>HRC Fuse</b>	<b>AREVA/SS/Siemens/ Hivelm</b>
<b>7.</b>	<b>TTB</b>	<b>DAV</b>
<b>8.</b>	<b>Semaphore</b>	<b>AREVA/DAV</b>
<b>9.</b>	<b>Indication lamps</b>	<b>Vaishnav/ Equi.</b>
<b>10.</b>	<b>Energy meter &amp; Digital Multifunction Energy Meter</b>	<b>SEMS</b>
<b>11.</b>	<b>Multi Functional Transducer(MFT)</b>	<b>SEMS</b>

**Note:** In the BOM to be submitted along with drawing the makes/ models should be invariably mentioned. The approved BOM/ drawing shall be binding on the bidder.

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ANNEXURE-III**BILL OF MATERIAL**

**The details of relays and other facilities required in each 33 KV C&R panel is mentioned below :-**

S. No	Protection Schemes	33 KV X'mer	33 KV feeder bay
1	Numerical directional IDMT relay with high set (3 O/C + 1 E/F)	1 No.	1 No.
2	Trip circuit supervision relay	2 Nos.	2 Nos.
3	DC Auxiliary 110 V/220V supply voltage monitoring relay	2 No.	2 No.
4	Numerical Local Breaker back up relay	In built.	In built.
5	Over load Protection	01 No.	NIL
6	Master trip relay	2 Nos.	2 Nos.
7	LBB Trip relay	1 No.	1 No.
8	Multifunction Energy Meter:	1 No.	1 No.
9	Digital frequency meter (1 inch LED display)	01 No.	NIL
10	Annunciator relay	1 Set	1 Set
11	Trip transfer switch	1 No.	1 No.
12	TNC switch	1 No.	1 No.
13	SEMS make Energy Meter 3 Phase 4 wire Export-import, with load survey facility, RS 485 port with TTB (heavy duty screw type TTB).	1 No.	1 No.
14	Indicating LEDs Lamps, semaphores	As per requirement	
15	df/dt relay	In built	
16	Multifunction Transducer	1 No.	1 No.

**Annexure - IV****PRE-CONTRACT INTEGRITY PACT****1. GENERAL**

- 1.1 This pre-bid contract Agreement (hereinafter called the Integrity Pact) is made on.....day of the month .....20..., between the CSPTCL acting through Shri.....C.E. (P&P) (hereinafter called the “BUYER”, which expression shall mean and include, unless the context otherwise requires, his successors in the office and assigns) and the First Party, proposes to procure (name of the Stores/Equipment/Work/Service) and M/s. .... represented by Shri.....Chief Executive Officer (hereinafter called the “BIDDER/Seller”, which expression shall mean and include, unless the context otherwise requires, his successors on permitted assigns) and the Second Party, is willing to offer/has offered.
- 1.2 WHEREAS the BIDDER is a Private Company/Public Company/ Government undertaking/Partnership/Registered Export Agency, constituted in accordance with the relevant law in the matter and the BUYER is a power company an undertaking of Govt. of CG, performing its function on behalf of the Government of Chhattisgarh.

**2. OBJECTIVES**

NOW, THEREFORE, the BUYER and the BIDDER agree to enter into this pre-contract agreement, hereinafter referred to as Integrity Pact, to avoid all forms of corruption by following a system that is fair, transparent and free from any influence/prejudiced dealings prior to, during and subsequent to the Contract to be entered into with a view to:-

- 2.1. Enabling the BUYER to obtain the desired Stores/Equipment/Work/Service at a competitive price in conformity with the defined specifications by avoiding the high cost and the distortionary impact of corruption on public procurement, and
- 2.2. Enabling BIDDERS to abstain from bribing or indulging in any corrupt practices in order to secure the contract by providing assurance to them that their competitors will also abstain from bribing any corrupt practices and the BUYER will commit to prevent corruption, in any form, by its official by following transparent procedures.

**3. COMMITMENTS OF THE BUYER**

The BUYER commits itself to the following:-

- 3.1 The BUYER undertakes that no official of the BUYER, connected directly or indirectly with the contract, will demand, take promise for or accept, directly or through intermediaries, any bribe, consideration, gift, reward, favour or any material or immaterial benefit or any other advantage from the BIDDER, either for themselves or for any person, organization or third party related to the contract in exchange for an advantage in the bidding process, bid evaluation, contracting of implementation process related to contract.
- 3.2 The BUYER will, during the pre-contract stage, treat BIDDERS alike, and will provide to all BIDDERS the same information and will not provide any such information to any particular BIDDER which could afford an advantage to that particular BIDDER in comparison to the other BIDDERS.
- 3.3 All the officials of the BUYER will report the appropriate Government office any attempted or completed breaches of the above commitments as well as any substantial suspicion of such a breach.

In case any such preceding misconduct on the part of such official(s) is reported by the BIDDER to the BUYER with the full and verifiable facts and the same prima facie found to be correct by the BUYER, necessary disciplinary proceedings, or any other action as deemed fit, including criminal proceedings may be initiated by the BUYER and such a person shall be

debarred from further dealings related to the contract process. In such a case while an enquiry is being conducted by the BUYER the proceedings under the contract would not be stalled.

#### 4. **COMMITMENTS OF BIDDERS**

The BIDDER commits itself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of its bid or during any pre-contract or post-contract stage in order to secure the contract or in furtherance to secure it and in particular commit itself to the following:-

- 4.1. The BIDDER will not offer, directly or through intermediaries, any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the BUYER, connected directly or indirectly with the bidding process, or to any person, organization or third party related to the contract in exchange for any advantage in the bidding, evaluation, contracting and implementation of the contract.
- 4.2. The BIDDER further undertakes that it has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage, or inducement to any official of the BUYER or otherwise in procuring the Contract of forbearing to do or having done any act in relation to the obtaining or execution of the contract or any other contract with the CSPTCL for showing or forbearing to show favour or disfavour to any person in relation to the contract or any other contract with the CSPTCL.
- 4.3. The BIDDER further confirms and declares to the BUYER that the BIDDER in the original Manufacture/Integrator/Authorized government sponsored export entity of the stores and has not engaged any individual or firm or company whether Indian or foreign to intercede, facilitate or in any way to recommend to the BUYER or any of its functionaries, whether officially or unofficially to the award of the contract to the BIDDER, nor has any amount been paid, promised or intended to be paid to any such individual, firm or company in respect of any such intercession, facilitation or recommendation.
- 4.4. The BIDDER, either while presenting the bid or during pre-contract negotiations or before signing the contract, shall disclose any payment he has made, is committed to or intends to make to officials of the BUYER or their family members, agents, brokers or any other intermediaries in connection with the contract and the details of services agreed upon for such payments.
- 4.5. The BIDDER will not collude with other parties interested in the contract to impair the transparency, fairness and progress of the bidding process, bid evaluation, contracting and implementation of the contract.
- 4.6. The BIDDER will not accept any advantage in exchange for any corrupt practice, unfair means and illegal activities.
- 4.7. The BIDDER shall not use improperly, for purpose of competition or personal gain, or pass on to others, any information provided by the BUYER as part of the business relationship, regarding plans, technical proposal and business details, including information contained in any electronic data carrier. The BIDDER also undertakes to exercise due and adequate care lest any such information is divulged.
- 4.8. The BIDDER commits to refrain from giving any compliant directly or through any other manner without supporting it with full and verifiable facts.
- 4.9. The BIDDER shall not instigate or cause to instigate any third person to commit any of the acts mentioned above.

#### 5. **PREVIOUS TRANSGRESSION**

- 5.1. The BIDDER declares that no previous transgression occurred in the last three years immediately before signing of this Integrity Pact with any other company in any country in respect of any corrupt practices envisaged hereunder or with any Public Sector Enterprise in India or any Government Department in India that could justify BIDDER's exclusion from the tender process.
- 5.2. If the BIDDER makes incorrect statement on this subject, BIDDER can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

## 6. **EARNEST MONEY (SECURITY DEPOSIT)**

- 6.1. Every BIDDER while submitting commercial bid, shall deposit an amount as specified in RFP as Earnest Money/Security Deposit, with the BUYER through any of the following instruments:
- (i) Bank Draft or Pay Order in favor of.....
  - (ii) A confirmed guarantee by an Indian Nationalized Bank, promising payment of the guarantee sum to the .....(BUYER).....on demand within three working days without any demur whatsoever and without seeking any reasons whatsoever. The demand for payment by the BUYER shall be treated as conclusive proof of payment.
  - (iii) Any other mode or through any other instrument (to be specified in the RFP).
- 6.2. The Security Deposit shall be valid up to complete conclusion of the contractual obligations to the complete satisfaction of both the BIDDER and BUYER, including warranty period, whichever is later.
- 6.3. In the case of successful BIDDER a clause would also be incorporated in the Article pertaining to Performance Bond in the Purchase Contract that the provisions of Sanctions for violation shall be applicable for forfeiture of Performance Bond in case of a decision by the BUYER to forfeit the same without assigning any reason for imposing sanction for violation of this Pact.
- 6.4. No interest shall be payable by the BUYER to the BIDDER on Earnest Money/Security Deposit for the period of its currency.

## 7. **SANCTIONS FOR VIOLATIONS**

- 7.1. Any breach of the aforesaid provisions by the BIDDER or any one employed by it or acting on its behalf (whether with or without the knowledge of the BIDDER) shall entitle the BUYER to take all or any one of the following actions, wherever required:-
- (i) To immediately call off the pre contract negotiations without assigning any reason or giving any compensation to the BIDDER. However, the proceedings with the other BIDDER(s) would continue.
  - (ii) To forfeit fully or partially the Earnest Money Deposit (in pre-contract stage) and/or Security Deposit/Performance Bond (after the contract is signed), as decided by the BUYER and the BUYER shall not be required to assign any reason therefore.
  - (iii) To immediately cancel the contract, if already signed, without giving any compensation to the BIDDER.
  - (iv) To recover all sum already paid by the BUYER, and in case of the Indian BIDDER with interest thereon at 2% higher than the prevailing Prime Lending Rate while in case of a BIDDER from a country other than India with Interest thereon at 2% higher than the LIBOR. If any outstanding payment is due to the BIDDER from the BUYER in connection with any other contract such outstanding payment could also be utilized to recover the aforesaid sum and interest.



- (v) To encash the advance bank guarantee and performance bond/warranty bond, if furnished by the BIDDER, in order to recover the payments, already made by the BUYER, along with interest.
- (vi) To cancel all or any other contracts with the BIDDER and the BIDDER shall be liable to pay compensation for any loss or damage to the BUYER resulting from such cancellation/rescission and the BUYER shall be entitled to deduct the amount so payable from the money(s) due to the BIDDER.
- (vii) To debar the BIDDER from participating in future bidding processes of the CSPTCL for a minimum period of five years, which may be further extended at the discretion of the BUYER.
- (viii) To recover all sum paid in violation of this Pact by BIDDER(s) to any middlemen or agent or broken with a view to securing the contract.
- (ix) In cases where irrevocable Letters of Credit have been received in respect of any contract signed by the BUYER with the BIDDER, the same shall not be opened.
- (x) If the BIDDER or any employee of the BIDDER or any person action on behalf of the BIDDER, either directly or indirectly, is closely related to any of the officers of the BUYER, or alternatively, if any close relative of an officer of the BUYER has financial interest/stake in the BIDDER's firm, the same shall be disclosed by the BIDDER at the time of filling of tender. Any failure to disclose the interest involved shall entitle the BUYER to rescind the contract without payment of any compensation to the BIDDER.

The term 'close relative' for this purpose would mean spouse whether residing with the Government servant or not, but not include a spouse separated from the Government servant by a decree or order of a competent court; son or daughter or step son or step daughter and wholly dependent upon Government servant, but does not include a child or step child who is no longer in any way dependent upon the Government servant or of whose custody the Government servant has been deprived of by or under any law; any other person related, whether by blood or marriage, to the Government servant or to the Government servant's wife or husband and wholly dependant upon Government servant.

- (xi) The BIDDER shall not lend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any employee of the BUYER, and if he does so, the BUYER shall be entitled forthwith to rescind the contract and all other contracts with the BIDDER. The BIDDER shall be liable to pay compensation for any loss or damage to the BUYER resulting from such rescission and the BUYER shall be entitled to deduct the amount so payable from the money(s) due to the BIDDER.
- 7.2. The decision of the BUYER to the effect that a breach of the provisions of this pact has been committed by the BIDDER shall be final and conclusive on the BIDDER. However, the BIDDER can approach the Monitor(s) appointed for the purpose of this Pact.

## 8. **INDEPENDENT MONITORS**

- 8.1. The BUYER will appoint Independent Monitors (hereinafter referred to as Monitors) for this Pact.
- 8.2. The task of the Monitors shall be to review independently and objectively, whether and to what extent the parties comply with the obligations under this Pact.
- 8.3. The Monitors shall not be subject to instructions by the representatives of the parties and perform their functions neutrally and independently.
- 8.4. Both the parties accept that the Monitors have the right to access all the documents relating to the project/ procurement, including minutes of meetings. The Monitor shall be under contractual obligation to treat the information and documents of the BIDDER/ Subcontractor(s) with confidentiality.

- 8.5. As soon as the Monitor notices, or has reason to believe, a violation of this Pact, he will so inform the Authority designated by the BUYER.
- 8.6. The Monitor will submit a written report to the designated authority of BUYER/Secretary in the department/within 8 to 10 weeks from the date of reference or intimation to him by the BUYER /BIDDER and, should the occasion arise, submit proposal for correcting problematic situations.

**9. FACILITATION OF INVESTIGATION**

In case of any allegation of violation of any provision of this fact or payment of commission, the BUYER or its agencies shall be entitled to examine all the documents including the books of Account of the BIDDER and the BIDDER shall provide necessary information of the relevant documents and shall extend all possible help for the purpose of such examination.

**10. LAW AND PLACE OF JURISDICTION**

This pact is subject to Indian Law, the place of performance and jurisdiction shall be the seat of the BUYER.

**11. OTHER LEGAL ACTIONS**

The actions stipulated in this integrity Pact are without prejudice to any other legal action that may follow in accordance with the provisions of any other law in force relating to any civil or criminal proceeding.

**12. VALIDITY**

- 12.1. The validity of this integrity Pact shall be from the date of its signing and extend up to 2 years or the complete execution of the contract to the satisfaction of both the BUYER and the BIDDER/Seller whichever is later. In case BIDDER is unsuccessful, this Integrity Pact shall expire after six months from the date of the signing of the contract.
- 12.2. If one or several provision of this pact turns out to be invalid; the remainder of this pact shall remain valid. In such case, the parties will strive to come to an agreement to their original intention.

13. The parties hereby sign this integrity Pact at .....on.....

BUYER

BIDDER

Name of Officer

CHIEF EXECUTIVE OFFICER

Destination Department/PSU

Witness

Witness

1).....

1) .....

2).....

2) .....

**ANNEXURE – V****PROFORMA FOR BANK GUARANTEE TOWARDS SECURITY DEPOSIT**

**(To be executed on non-judicial stamp paper of Rs. 250/- and  
Rs 1/- Revenue stamp may be affixed on Bank Guarantee)**

Bank Guarantee No..... Dated.....

In consideration of the Chhattisgarh State Power Transmission Company Limited, Raipur ( A successor company of Chhattisgarh State Electricity Board, Raipur hereinafter referred to as 'CSPTCL') having agreed to accept this Bank Guarantee in lieu of cash deposit by way of Security for due and faithful performance required from M/s. \_\_\_\_\_

\_\_\_\_\_ (herein after referred to as "Contractors", the Bank of \_\_\_\_\_ hereby agrees unequivocally and unconditionally to pay within 48 hours on demand in writing from the Chhattisgarh State Power Transmission Company Limited or any officer authorized by it in this behalf of any amount upto and not exceeding Rs.....(in words) ..... only to the said Chhattisgarh State Power Transmission Company Limited on behalf of the aforesaid M/s ..... who have tendered and contracted for the supply of materials, equipment's or services to the said the Chhattisgarh State Transmission Company Ltd, against order No..... dated..... For the order value of Rs.....

The beneficiary of this Bank Guarantee shall be Chhattisgarh State Power Transmission Company Limited, Raipur (A Successor Company of erstwhile CSEB Raipur). The proceeds / encashment of this Bank Guarantee would go in the name of Chhattisgarh State Power Transmission Company Limited, Raipur (A Successor Company of erstwhile CSEB Raipur).

This agreement should be valid .....and binding on this bank up to and including claim period upto \_\_\_\_\_ 20\_\_\_\_or for such further period as may here under be mutually fixed from time to time in writing by the Chhattisgarh State Transmission Company Ltd. and the contractor shall not be terminable by notice or any change in the constitution of the aforesaid bank or the firm of Contractors or by any others reasons whatsoever and the Banker's liability hereunder shall not be impaired or discharged by any extension of time or variations or alteration made, given conceded or agreed to with or without the Bank knowledge or consent by or between the Chhattisgarh State Transmission Company Ltd. and contractor in the existing and / or further tenders and / or contracts.

It is agreed by the Bank with the CSPTCL that if for any reason a dispute arises concerning the Bank's liability to pay the requisite amount to the CSPTCL under the terms of this guarantee the competent court at Raipur alone shall have the jurisdiction to determine the said dispute and that this shall be without prejudice to the liability of the Bank under the terms of this guarantee being unequivocal and unconditional as mentioned above.

The liability under this guarantee is restricted to Rs..... (in words) .....only. This guarantee shall remain in force until dtd....., unless a demand to enforce a claim under the guarantee is made by CSPTCL to the Bank upto dtd..... the rights of the CSPTCL under this guarantee shall be forfeited and Bank shall be relieved and discharged from all liabilities there under.

WITNESSES:-

SIGNATURE

1. ....  
2. ....

Authorized Signatories of Bank

Signed. \_\_\_\_\_

for \_\_\_\_\_ Bank

**CHECK LIST OF DOCUMENT**

S.No	ITEMS	REFERENCE	Whether submitted / not submitted
1	Bank draft of tender cost (if downloaded)	Covering letter As per clause 2 Section-I	Yes/No
2	Bank draft of Earnest Money Deposit,	Covering letter (As per clause 3 Section-I)	Yes/No
3	GTP for 33KV C & R Panel for X-mer & Feeder	Schedule-II	Yes/No
4	Schedule of Bidders experience	Schedule-IV A	Yes/No
5	Manufacturer's Details	Schedule-IV B	Yes/No
6	Commercial Information	Schedule-V	Yes/No
7	Schedule of Commercial Deviation	Schedule-VI-A	Yes/No
8	Schedule of Technical Deviation	Schedule-VI-B	Yes/No
9	Technical Information	Schedule-VII	Yes/No
10	General Information	Schedule-VIII	Yes/No
11	Pre-contract integrity pact	Annexure-IV	Yes/No
12	Bank guarantee Performa for Security Deposit	Annexure-V	Yes/No
13	NSIC/DIC/ Factory registration certificate	As per PQR 5(A) 1.1	Yes/No
14	For 3 years' experience in supply –Copy of purchase order along with relevant MRC/Performance	As per PQR 5(A) 1.2	Yes/No
15	Type test certificate not older than 7 years	As per PQR 5 (A) 1.3,1.4	Yes/No
16	Financial data for previous 5 years	As per PQR 5(B) 1.1	Yes/No
17	CA certified Net worth certificate	As per PQR 5 (B) 1.2	Yes/No
18	Declarations	As per PQR 5(B) 1.3 & 5( C) 1.1 , 1.2	Yes/No
To avoid rejection, please read tender document carefully and refer tender document for submission of any Further document/schedule/ annexure .			

**EXTREMELY IMPORTANT (Bidders to note this to avoid bid rejection):-**

**i) It will be the sole responsibility of the bidder to make sure that all the documents required as per tender are submitted along with bid on or before due date of tender. The bid submission date is cut of date for all the documents required as per tender and every bidder must adhere to this dead line.**

**However, if any short coming is observed during scrutiny of TC bid, CSPTCL reserves the right to seek required clarification/documents from bidder by giving them only one chance to submit required documents/ clarifications/ confirmations within specified time limit.**

**ii) If a bidder has quoted 'NIL' deviation in Schedule- VIA (deviation from technical specification/ conditions) and Schedule- VIB (deviation from commercial conditions) this will have an overriding effect on any other conditions notes as deviations elsewhere in the bid.**

**Signature & Seal of the Bidder**