

Tender enquiry
for
Rate Contract (Framework Agreement)
for supply of
OVERHEAD CONDUCTORS
Quantity: 75 KM
for a period of 2 years (24 months)
in 70:30 ratio

BHEL-TBG NIT terms & condition applicable

List of enclosures: -

1. Standard General Terms and Conditions of NIT (Doc. No. BHEL/TBG/GTC/RC/MJ/2022-23)
2. Pre- Qualification Requirement(PQR)- [Annexure-I (T) & Annexure I (F)]
3. Activity Schedule (Annexure-II),
4. Billing Checklist – (Annexure-III)
5. Arbitration clause: - (Annexure-IV)
6. Format for declaration of minimum local content (Annexure-V).
7. Instruction of DPIIT Compliance to GOI Order for restrictions under Rule 144 (xi) of General Financial Rules (GFRs), 2017 (Annexure-VI, VII/ VIII (whichever applicable)
8. MOP circular dated 02-07-2020 and its subsequent amendment, if any, in prescribed format (Annexure-IX/ X).
9. Format of Integrity pact (Annexure-XI).
10. Risk Purchase Clause (Annexure-XII)
11. PVC Clause & IEEMA Formula (Annexure-XIII)
12. Format of Security cum Performance BG (Annexure –XIV).
13. List of Banks for the Submission of Security cum Performance Bank Guarantee (Annexure-XV)
14. Guidelines for Reverse Auction – 2021 (Annexure-XVI)
15. Contact details required from bidders (Annexure-XVII)
16. Commercial (Annexure XVIII) & Technical deviation Sheet (Annexure XIX)
17. UNPRICED BID FORMAT (Annexure XX).
18. MRC format
19. Inspection call format
20. PPP-MII-Order-2020-16th Sep 2020 & Minimum Local Content, Ministry of Power dated 16.11.2021
21. Technical Specification No.: - TB-STD-316-019, Rev 04 dt 04.08.22

**BHARAT HEAVY ELECTRICALS LTD.
(TRANSMISSION BUSINESS GROUP)**

GENERAL TERMS AND CONDITIONS FOR TENDER ENQUIRY / CONTRACT

This is to be submitted duly signed and stamped by bidder. Clause-wise deviations and / or additional conditions / clarifications, if any, are to be brought out clearly in “Schedule of Commercial Deviation”. Deviations and / or additional conditions / clarifications, if any, mentioned elsewhere in the bid / offer, shall not be considered.

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1.	<p>INSTRUCTION TO BIDDERS:</p> <p>1.1 Sealed bids are invited for the items mentioned in the tender enquiry conforming to the NIT including Technical Specifications. Bids should be typed and free from overwriting and erasures. Corrections or additions / deletions, if any, must be clearly written and attested, otherwise offer may be rejected.</p> <p>1.2 deleted</p> <p>1.3 Tender is invited through e-Procurement System only. The bidder shall submit their bid through e-Procurement platform only at (https://eprocurebhel.co.in/). Bidders participating through e-procurement portal for this tender should have Class-III Digital Signature Certificate (DSC) for Signing & Encryption of bids issued by any of the valid Certifying Authorities (approved by Controller of Certifying Authorities) in India.</p> <p>1.4 Offer Submission Time: 11:00 Hrs IST, Offer Opening Time: 16:00 Hrs IST</p> <p>The critical Dates of tendering activities shall be provided separately during tendering processes. Address of tender Issuing Authority: - BHARAT HEAVY ELECTRICALS LIMITED (TRANSMISSION BUSINESS GROUP), 10TH Floor, Plot no.: - C-20, 1A/1, Joy towers, C Block, Phase 2, Industrial Area, Sector-62, Noida, Distt. Gautambudh Nagar, UP-201309.</p> <p>1.5 Bids are to be submitted in two parts: -</p> <p>a) Techno-commercial Bid (Part-I) – All techno-commercial and PQR documents to be submitted along with un-priced copy of Price Bid (Part-II) clearly mentioning as “Quoted” as per format without prices.</p> <p>b) Price Bid (Part-II) – This bid should contain only Price bid with prices quoted in figures and words. This should not contain any Technical and / or Commercial Terms and Conditions.</p> <p>1.6 deleted</p> <p>1.7 For any technical clarification please contact: Smt. Shobhna, Sr. Manager (TBEM), Email: shobhna@bhel.in Tel No 0120-6748514.</p> <p>1.8 For any commercial clarification please contact: Sh. Manish Jain, Manager (TBMM), Email: manish.jain@bhel.in, Tel No 0120-6748484.</p>

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	<p>1.9 Price bid (Part-II) should not contain any additional information / description other than given in “Un-Priced Bid” submitted with “Techno-commercial Bid (Part-I)” except prices, otherwise bid is liable for rejection.</p> <p>1.10 Price Bid submitted along with the bid shall remain valid up to validity of offer. Any discount / revised offer submitted by the bidder on its own shall be accepted provided it is received before the due date and time of offer submission (i.e. Part-I Bid). The discount shall be applied on pro-rata basis to all items including optional items, if any, unless specified otherwise by the bidder. Discount offered shall be valid for full duration of validity of the offer including extension of validity, if any. Unsolicited Supplementary / Revised Price Bid submitted after the due date and time of offer submission (i.e. Part-I Bid), during validity period of offer, unless asked by BHEL, shall not be considered. Withdrawal of quotation by the bidder, at any stage after its opening, may entail suitable action against such bidder by BHEL.</p> <p>1.11 The consultants / firm (and any of its affiliates) shall not be eligible to participate against tender enquiry for the related goods or works or services for the same project, if they were engaged by BHEL-TBG for the consultancy services.</p> <p>1.12 deleted</p> <p>1.13 Non-conformities / errors / discrepancies in quoted prices in price bids shall be dealt as follows: -</p> <ol style="list-style-type: none"> a) If, in the price structure quoted for the required goods / services / works, there is discrepancy between the unit price and the total price (which is obtained by multiplying the unit price by the quantity), the unit price shall prevail and the total price corrected accordingly, unless in the opinion of BHEL there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price corrected accordingly. b) If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected. c) If there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above. d) If there is such discrepancy in an offer as mentioned in (a), (b) & (c) above, the same shall be conveyed to the bidder with target date up to which the bidder has to send his acceptance on the above lines and if the bidder does not agree to the decision of the BHEL, the bid is liable to be ignored. <p>1.14 Taxes and Duties payable extra as per Clause No. 2.3 in NIT, if not specified/quoted clearly as extra shall be considered as included in Ex-Works Price and therefore shall not be reimbursed. Taxes and duties not payable extra as per NIT shall be deemed to be included in Ex-Works Price.</p> <p>1.15 If the rates for taxes and duties in respect of the quoted materials and / or services assumed by the Supplier are less than the tariff prevailing at the time of tendering, Supplier will be responsible for such under quotations. However, if the rates assumed are higher than the correct rates prevailing at the time</p>

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	<p>tendering, the difference will be to the credit of BHEL.</p> <p>Note: Representative / official deputed by the bidder to witness tender opening must produce authorization letter for the same.</p>
2.	<p>PRICES:</p> <p>2.1 Price Variation Clause (PVC): Prices shall be on PVC basis as per attached IEEMA Formula (ANNEXURE-XIII)</p> <p>2.2 Unless specifically indicated in the NIT, the prices shall be on INR basis.</p> <p>2.3 The prices are to be quoted as per Price Bid uploaded on NIC Portal.</p> <p>The break-up of prices shall be as under:</p> <p>a) Ex-works Price: Ex-works price including packing & forwarding charges.</p> <p>b) Freight & Insurance:</p> <ol style="list-style-type: none"> 1. The F&I charges will be considered as 3.58% of PO EX-Works value without GST. The destination can be anywhere in India. Supplier to Quote Ex-works rate accordingly. 2. If total PO quantity is less than 4.5KM, PO Ex- works value of 4.5KM without GST will be considered for calculation of F&I charges. 3. GST will be payable as per prevailing rate in addition to above calculated F&I Charges. Present rate of GST is 18%. <p>Note: The purchase orders shall be placed on Ex-works basis. However, supplier has to arrange Freight & Insurance on behalf of BHEL and reimbursement of same shall be given to vendor as per above rate.</p> <p>2.4 GST rates along with HSN/SAC code as applicable on Sr No (a) above is to be mentioned separately in percentage in both un-priced bid and price bid.</p> <p>Note:</p> <ol style="list-style-type: none"> i) Unless otherwise specified in the NIT, the purchase order shall be placed on Ex-works basis. ii) Prices quoted shall be in Indian Rupees only. iii) Unless otherwise specified in the NIT, unloading at Site / Destination shall not be in the scope of the supplier. iv) Prices in respect of Sr No (a) of Clause 2.3 above are to be quoted inclusive of all taxes & Duties, charges. Levies, royalty etc. If any, excluding GST. v) Scope for Custom clearance (if applicable) for export project site: - Custom clearance, payment of custom duty shall be in the scope of the BHEL/BHEL's appointed Agency. <p>Following may be ensured:</p> <ul style="list-style-type: none"> • One invoice for one vehicle-load job to be ensured to streamline the dispatch and documentation at the border. • Merging of consignments with an ODC consignment in the same invoice to be avoided wherever possible, so that vehicles may not be stranded at the customs gate. • Immediate after dispatching vehicles, all the requisite documents

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	(invoices, LR copy, packing list, e-way bill etc.) to be sent to BHEL for advanced clearance of the customs, IBN approval etc. in order to avoid detention at border.
3.	<p>TERMS OF PAYMENT:</p> <p>Payment shall be made within 45 days for MSE (Micro & Small Enterprises) / within 60 days for Medium Enterprises / within 90 days for non MSME suppliers.</p> <p>100% of basic price of materials supplied as per PO, along with 100% of GST & F&I, shall be paid on pro-rata basis on receipt of complete Invoice along with documents in 3 sets (original + 2 copies) as follows:</p> <ul style="list-style-type: none"> · Material receipt Certificate duly endorsed by BHEL Site Official. · GST Compliant Tax Invoice · Packing List (Case-wise) · Copy of Transit Insurance Certificate from underwriters. · Material Inspection Clearance Certificate (MICC) issued by BHEL Quality Management. · Guarantee Certificate. · Copy of Security Cum Performance Bank Guarantee. <p>Note:</p> <ol style="list-style-type: none"> i) Supplier has to submit invoice(s) as per PO along with billing checklist (Annexure-III). ii) In case of supplies for overseas project, Material Receipt Certificate issued by BHEL Authorized Representative shall also be acceptable. iii) In case of Transit Insurance under Open Insurance Policy, Intimation / Declaration of Transit Insurance as per terms of the relevant Open Insurance Policy along with copy of Open Insurance Policy from underwriters shall also be acceptable. iv) Supplier has to ensure commencement of transit insurance from the date not later than LR / GR date. v) Supplier has to submit Tax Invoice(s). Supplier should ensure that Tax Invoice should comply all statutory requirements under GST Law to enable BHEL to avail input credit vi) MSMED Act, 2006 and the rules made thereunder as amended from time to time shall be applicable for release of payment to suppliers qualified & registered as Micro & Small Enterprises based on documents mentioned in the NIT for MSME. vii) Supplier has to submit BG (as per BHEL format) & Guarantee Certificate as per PO terms. viii) In case any shortages and / or damages in supplies / adverse remarks on receipted LR/GR, an amount calculated based on comments against LR/GR/ Material Receipt Certificate issued by the BHEL Site Official shall be withheld from the supply payment against sl. No. 3 above to be deemed fit by BHEL. The withheld amount shall be released after the shortages and / or damages in supplies are supplied / replenished against Certification by BHEL Site Official. ix) Payment of GST component shall be made only if vendor has deposited the Tax and credit for the same is reflected in GSTN (GST Network). In case credit of the same is not reflected in GSTN, vendor may alternatively furnish BG of GST Amount for a period valid for not less than 1 month. In case of disallowance of credit /non reflection of credit in GSTN, amount will be recovered from supplier along with applicable Interest, penalty etc. from any of his dues. x) If GST is payable by BHEL on reverse Charge Mechanism basis, vendor should ensure the submission of GST compliant Tax invoice immediately on dispatch/

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	<p>performance of service. In case of non-compliance any additional charges towards interest, penalty etc. will be to vendors account.</p> <p>xi) TDS under GST Act, if applicable, shall be deducted unless Exemption Certificate If applicable, from the appropriate authority is furnished to BHEL along with Invoice.</p>
4.	<p>INTEREST LIABILITY: In case of any delay in payment due to any reason, BHEL shall not pay any interest on delayed payment. Also, no interest shall be payable by BHEL on the bank guarantee / deposit amount or balance payment or any other money which may become due owing to difference or misunderstanding or any dispute before any quasi judicial authority between BHEL and the Supplier / Contractor.</p>
5.	<p>GUARANTEE: The equipment / material supplied shall be guaranteed to be free from all defects and faults in design & engineering, material, workmanship & manufacture and in full conformity with the Purchase Order / Contract, Technical Specifications & approved drawings / data sheets, if any, for 18 months from the date of last delivery.</p> <p>The defective equipment / material / component shall be replaced free of cost at site. Freight & Insurance during transit shall also be in the scope of the supplier / contractor. Any expenditure for dismantling and re-erection of the replaced equipment / material / component shall be to supplier's / contractor's account. All replacements during the guarantee period shall be delivered at site promptly and satisfactorily within a period not more than 45 days from the date of reporting the defect / rejection etc.</p> <p>In the event of the supplier / contractor failing to replace the defective equipment / material / component within the time period mentioned above, BHEL may proceed to undertake the replacement of such defective equipment / material / component at the risk and cost of the supplier / contractor without prejudice to any other rights under the contract and recover the same from BG / other dues of this Purchase Order / Contract or any other Purchase Order / Contract executed by the supplier / contractor.</p>
6.	DELETED
7.	<p>SECURITY CUM PERFORMANCE BANK GUARANTEE (Annexure XIV): A Security cum Performance Bank Guarantee amounting equal to the value of Two percentage (2%) of Ex-work of rate contract value shall be taken from the vendor who enter into rate contract against this Enquiry and the Bank Guarantee shall be submitted by vendor which should be initially valid till 21 (18 months +3 months claim period) months from the date of expiry of Validity of Rate contract.</p> <p>This BG have to be submitted within 30 days from the date of award of Rate Contract. In case of non-submission of said BG, an amount equal to BG value shall be withheld from the Invoices of the vendor and will be released after 21 months from the date of expiry of Validity of Rate contract.</p> <p>"Bidder agrees to submit performance security required for execution of the contract within the time period mentioned. In case of delay in submission of performance security, enhanced performance security which would include interest (SBI rate + 6%) for the delayed period, shall be submitted by the bidder. Further, if performance security is not submitted till such time the first bill becomes due, the amount of performance security due shall be withheld as per terms and conditions defined in NIT / Contract, and due interest shall be recovered from the bills"</p>

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	<p>[A] Within the validity of Rate Contract: Value of the Bank Guarantee (at the time of initial submission) shall remain unchanged for any subsequent variations in Rate Contract value up to $\pm 30\%$.</p> <p>[B] After expiry of validity of Rate contract: In case variation in value of total Purchase Orders placed under Rate contract is beyond -30%: (i) Vendor may opt to submit revised BG amounting equal to Two percentage (2%) of Ex-works value of total Purchase orders for which dispatches are completed as on date of expiry of Rate Contract. Validity of such BG shall be as per original terms i.e. 21 (18 months +3 months claim period) months from the date of expiry of Validity of Rate contract. (ii) Vendor may opt to submit separate BG amounting for Two percentage (2%) of the ex-works value of the total Purchase Orders for which delivery is yet to be completed as on date of expiry of Rate contract. Validity of such BG shall be till 21 (18 months validity + 3 months claim period) months from the date of last dispatch under such Purchase orders. (iii). Upon Submission of the BGs as per [B](i) & [B](ii) above, initially submitted BG against Rate contract shall be returned to vendor.</p> <p>[C] In case vendor does not opt provisions as per [B](i) and [B](ii) above (or) variation in value of total Purchase orders placed under Rate contract is within $\pm 30\%$, validity of the initially submitted BG must be extended so as to cover 21 (18 months validity + 3 months claim period) months from the date of last dispatch of PO under Rate Contract.</p> <p>Note:</p> <ol style="list-style-type: none"> i) The Bank Guarantee shall be from any bank as per Annexure-XV for List of Banks (32 Nos.). The original BG should be sent by issuing Bank directly to AGM (Finance), TBG, BHEL, Noida. ii) Extension of validity of the BG in original, as per above clause, should be sent by issuing Bank directly to AGM (Finance), TBG, BHEL, Noida at least 45 days before expiry of validity of the BG. iii) Unless otherwise specified in the NIT, deviation taken for non-submission of BG / Deposit, as applicable, shall not be accepted. iv) In case of non-submission BG / Deposit, as applicable, BHEL reserve the right for Risk Purchase as per terms of the NIT and impose Suspension of Business Dealings with the Supplier / Contractor. v) BHEL reserve the right to encash the Bank Guarantee and forfeit the amount in the event of any default, failure or neglect on part of the Supplier in fulfilment of performance of the Purchase Order. vii) Vendor to ensure submission of Certificate of Final Documentation /Confirmation regarding Non applicability of Final Documentation, as the case may be, as referred in clause No 9 regarding Final Documentation. BG shall be released only after submission of the same to BHEL TBMM.
8.	<p>SUBMISSION OF DRAWINGS / DOCUMENTS FOR APPROVAL: Supplier shall submit the master document list within 14 days from date of Purchase Order / Contract, unless otherwise specified in the NIT, with planned dates for submission which shall be in line with activity schedule as per Purchase Order / Contract and shall be finalized with BHEL Engineering Management. Date of first submission of drawings / documents shall be certified by BHEL Engineering Management after the receipt of applicable drawings / documents (e.g. project specific cover sheet, GTP, OGA drawings, schemes, type test reports etc.) by BHEL. During detailed engineering stage, necessary hard copies of the engineering</p>

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	<p>drawings / documents shall also be submitted by the supplier as per the Purchase Order / Contract requirement. The supplier shall also submit the packing drawings as per technical specifications.</p> <p>In case item(s) offered require any interface details of other item (not in the scope of supplier & required for operating the equipment), the supplier has to submit interfaces schedule along with submission of engineering drawings / documents. It shall be responsibility of the supplier to get the details of the interfaced item from BHEL before manufacturing to avoid any mismatch at site.</p>
9.	DELETED
10.	<p>INSPECTION : BHEL / customer / third party shall inspect equipment / material before despatch. Stage inspection during manufacturing may also be carried out. Material to be despatched only after getting Material Inspection Clearance Certificate (MICC) issued by BHEL.</p> <p>Supplier shall send inspection call on prescribed format / web site only, with an advance notice of 14 days.</p> <p>Supplier to ensure submission of all routine / acceptance test reports, inspection reports and all other documents related to inspection, immediately to BHEL.</p> <p>BHEL representative is authorised to carry out audits along with Third Party Inspection Agency at vendor's / supplier's works before clearing the items for despatch.</p>
11.	<p>DESPATCH DOCUMENTS : Despatch documents to be immediately sent to BHEL on despatch are as follows: -</p> <ul style="list-style-type: none"> • Copy of Invoice • Copy of LR / GR • Copy of Packing List (Case-wise) • Copy of Transit Insurance Certificate from underwriters • Copy of Guarantee Certificate • E-Way bill (Part A & Part B) (if applicable)
12.	<p>DELIVERY PERIOD :</p> <p>Delivery requirement is mentioned in the Activity Schedule (Annexure-II). vendor to ensure supply/delivery of goods in time.</p> <p>The delivery conditions specified are for the contractual LD purpose. However, BHEL may ask for the early delivery without any compensation.</p> <p>Note: LR / GR date or invoice date (whichever is later) shall be considered as delivery date.</p>
13.	<p>LIQUIDATED DAMAGES FOR DELAYED DELIVERY:</p> <p>In case of delay in execution of Purchase Order beyond the contractual delivery time, an amount of 0.5% of PO value (Ex Works and F&I charges) for supply per week of delay or part thereof subject to a maximum of 10% of PO value (Ex Works and F&I charges) shall be deducted as Liquidated damages (LD) along with applicable GST (if any) on LD.</p> <p>Note:</p>

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	<p>i) In case of any amendment / revision in P.O, the LD shall be linked to the amended / revised Purchase Order / Contract value and delivery / completion time / schedule, if applicable.</p> <p>ii) LR / GR date or invoice date (whichever is later)-shall be treated as the date of dispatch for levying LD as above.</p> <p>iii) However, if time period between date of receipt of material at site / destination by Site Official & the date of LR / GR or invoice (whichever is later) is more than 30 days, where distance from place of despatch as per LR / GR is up to 1000 Kms or if time period between date of receipt of material at site / destination by Site Official & the date of LR / GR or invoice (whichever is later) is more than 45 days, where distance from place of despatch as per LR / GR is more than 1000 Kms, such excess period shall also be considered for LD purpose.</p> <p>iv) If, as per supplier, delay is not attributable to the supplier, delay analysis with documentary evidence may be submitted by the supplier at the earliest but not later than six months from the end of the financial year in which the payment is withheld. Based on the above details / documents submitted by the supplier, BHEL shall take final decision and if considered appropriate by BHEL, withheld amount (full or part as the case may be) shall be released, otherwise, full or balance withheld amount shall be treated as deduction of Liquidated damages (LD) towards delayed delivery.</p>
14.	<p>VALIDITY OF OFFER : The offer shall be valid for 120 days from the date of opening of tender (i.e. techno-commercial bid unless otherwise specified in the NIT).</p>
15.	<p>ACCEPTANCE / REJECTION OF TENDER: BHEL reserve the right to reject in full or part, any or all tender without assigning any reason thereof.</p> <p>BHEL also reserve right to vary the quantities as mentioned in the NIT. BHEL shall not be bound by any power of attorney granted by tenderer or by changes in composition of the firm made subsequent to award of order / contract. BHEL may however recognize such power of attorney and changes after obtaining proper legal advice, cost of which will be chargeable to the seller / contractor concerned. If the tenderer deliberately gives wrong information, BHEL reserves the right to reject such an offer at any stage or cancel the order / contract, if awarded, and forfeit the security deposit and bank guarantee.</p>
16.	<p>DEVIATION: The bids having deviation(s) w.r.t. tender are liable for rejection. However, BHEL, at its discretion, may load the prices for evaluation of offer with prior intimation to bidder.</p> <p>Clause-wise deviations and / or additional conditions / clarifications, if any, are to be brought out clearly in "Schedule of Commercial Deviation" If any. Deviations and / or additional conditions / clarifications, if any, mentioned elsewhere in the bid / offer, shall not be considered.</p>
17.	<p>TENDER EVALUATION: Comparative statement shall be prepared based on overall quantity basis unless otherwise indicated in the enquiry. Evaluation of offers shall be done on the basis of delivered cost to BHEL, Considering Ex-Works Price, GST, F&I(as per SN 2b). GST input credit available to BHEL shall be reduced from prices while determining L1 status.</p> <p>The quantity in KM length to be procured under each category as mentioned in BOQ is for evaluation purpose only and actual ordered quantity in KM length of conductor under each category may vary up to any extent limited to total value of the rate</p>

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	<p>contract.</p> <p>Evaluation in case of more than one L-1 bidders - In the course of evaluation, if more than one bidder happens to occupy L-1 status, effective L-1 will be decided by soliciting discount from respective L-1.</p> <p>In case more than one bidder happens to occupy the L-1 status even after soliciting discounts, the L-1 bidder shall be decided by a toss/draw of lots, in the presence of the respective L-1 bidder(s) or their representative(s).</p> <p>Ranking will be done accordingly. BHEL's decision in such situations shall be final and binding.</p>
18.	<p>LOADING CRITERIA: List of permissible deviations & loading criteria thereof are as follows: -</p> <p>a) Payment Terms: Base rate of SBI (as applicable on the date of bid opening / techno-commercial bid opening in case of two part bids) + 6% shall be considered for loading for the period of relaxation sought by bidder(s) against terms of payment in the NIT.</p> <p>b) Liquidated Damages (LD) for Delayed Delivery: Loading on LD clause shall be to the extent to which it is not agreed to by the bidder (at offered value).</p> <p>Note: Additional deviations (if considered acceptable by BHEL) & the loading criteria shall be communicated to all the qualified bidders before price bid opening.</p>
19.	<p>ARBITRATION: In the event of any dispute emanating from and relating to this contract, the matter shall be referred to the sole arbitration of the person appointed by the competent authority of BHEL. Subject to aforesaid, the provisions of "The Arbitration and Conciliation Act, 1996" and the rules made thereunder as amended from time to time in India shall apply to the arbitration proceedings. The venue of arbitration shall be in New Delhi.</p> <p>Further there shall be no claim for any interest of whatsoever nature/Kind on the claims and amount due to BHEL.</p> <p>However, in case of contract with Public Sector Enterprise / Undertaking (PSE/PSU) or Govt. Dept., the extant guidelines of Govt. of India shall be followed.</p> <p>Refer Annexure-IV attached along with NIT.</p>
20.	<p>LEGAL SETTLEMENT : Indian Courts at New Delhi / Delhi shall have exclusive jurisdiction to decide the dispute, if any, arising out of or in respect of the contract(s) to which these conditions are applicable. Contract, including all matters connected with contract, shall be governed by the Indian Law, both substantive and procedural, for the time being in force including modification thereto.</p>
21.	<p>SUB-CONTRACTING: In case further subcontracting of BHEL Purchase Order / Contract or part thereof is envisaged by supplier, the same can be done after written permission is obtained from BHEL. However, it shall not absolve the Supplier / Contractor of the responsibility of fulfilling BHEL Purchase Order / Contract requirements. In case of subcontracting of Purchase Order / Contract awarded by BHEL or part thereof without such permission, BHEL reserve the right to cancel the Purchase Order / Contract and source such material / component / equipment / system from any other agency at the risk and cost of the Supplier / Contractor.</p> <p>If Supplier / Contractor is an individual or proprietary concern and the individual or the proprietor dies or the partnership is dissolved or substantially affected, then</p>

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	<p>unless BHEL is satisfied that legal representative of individual Supplier / Contractor or proprietor of proprietary concern and surviving partners of partnership firm are capable of carrying out and completing the Purchase Order / Contract, BHEL shall be entitled to cancel the Purchase Order / Contract as to its incomplete portion and without being in any way liable to payment of any compensation to legal representative of Supplier / Contractor and / or to surviving partners of Supplier's / Contractor's firm on account of cancellation of the Purchase Order / Contract.</p> <p>Decision of BHEL that legal representatives of deceased Supplier / Contractor or surviving partners of the Supplier's / Contractor's firm cannot carry out and complete the Purchase Order / Contract shall be final and binding on the parties hereto.</p> <p>Terms and Conditions shall not get affected in case of de-merger / amalgamation / taking-over / re-constitution etc.</p>
22.	<p>RISK PURCHASE:</p> <p>In case the Supplier / Contractor fails to supply or fails to comply with terms & conditions of the Purchase Order / Contract or delivers equipment / material not of the contracted quality or fails to adhere to the contract specifications or fails to perform as per the activity schedule and there are sufficient reasons even before expiry of the delivery / completion period to justify that supplies shall be inordinately delayed beyond contractual delivery / completion period, BHEL reserve the right to cancel the Purchase Order / Contract either in whole or in part thereof without compensation to Supplier / Contractor and if BHEL so desires, may procure such equipment / material / items not delivered or others of similar description where equipment / material / items exactly complying with particulars are not readily procurable in the opinion of BHEL which is final and in such manner as deemed appropriate, at the risk and cost of the Supplier / Contractor and the Supplier / Contractor shall be liable to BHEL for any excess cost to BHEL. However, the Supplier / Contractor shall continue execution of the Purchase Order / Contract to the extent not cancelled under the provisions of this clause.</p> <p>Recovery amount on account of purchases made by BHEL at the risk and cost of Supplier / Contractor shall be the difference of total value of new Purchase Order (PO) value and total value of old Purchase Order for applicable items, where the total value of new PO is more than total value of old PO for applicable items, plus additional 5% of the total ex-works value of new PO as overheads.</p> <p>The Supplier / Contractor shall on no account be entitled to any gain on such risk & cost purchase. In case the purchase order (PO) value of the new PO is less than the PO value of the old PO, 5% of the total ex-works value of the new PO shall be recovered as overheads and the difference between the PO value of the old PO and the new PO shall not be considered for calculation of the recovery amount.</p> <p>Refer Annexure-XII attached along with NIT.</p>
23.	<p>ADJUSTMENT OF RECOVERY:</p> <p>Any amount payable by the Supplier / Contractor under any of the condition of this contract shall be liable to be adjusted against any amount payable to the Supplier / Contractor under any other Purchase Order / Contract awarded to him by any BHEL unit. This is without prejudice to any other action, as may be deemed fit, by BHEL.</p>
24.	<p>FORCE MAJEURE CONDITION:</p> <p>If by reason of war, civil commotion, act of god, Government restrictions, strike, lockout which are not in control of Supplier / Contractor the deliveries / services are delayed, Supplier / Contractor shall not be held responsible.</p> <p>If at any time during the continuance of the Purchase Order / Contract, the performance in whole or in part by either party of any obligations under the Purchase Order / Contract is prevented or delayed by reason of any war hostilities, acts of the public enemy, restrictions by Govt. of India, civil commotion, sabotage, fires, floods, explosion, epidemics, quarantine restrictions, strike, lock-outs or acts of God</p>

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	<p>(hereinafter referred to as “event”), which are not in control of Supplier / Contractor or BHEL, then provided notice of the happening of such event is given by either party to the other within fifteen (15) days from the date of occurrence thereof, neither party shall by reason of such event be entitled to terminate the Purchase Order / Contract nor shall have any claim for damages against each other in respect of such non-performance and delay in performance. Performance under the Purchase Order / Contract shall be resumed immediately after such event has come to an end or ceased to exist and decision of BHEL as to whether the deliveries have to be resumed or not shall be final, conclusive and binding on the parties hereto.</p> <p>In the event of the parties hereto not able to agree that a force majeure event has occurred, the parties shall submit the disputes for resolution pursuant to the provisions hereunder, provided that the burden of proof as to whether a force majeure event has occurred shall be upon the party claiming such an event.</p> <p>Notwithstanding above provisions, BHEL shall reserve the right to cancel the Purchase Order / Contract, wholly or partly, in order to meet the overall project schedule and make alternative arrangements for completion of delivery and other schedules.</p>
25.	<p>MANUFACTURING QUALITY PLAN (MQP): Format of MQP for NTPC and POWERGRID are attached along with NIT for reference. However, Supplier to submit MQP for each project in line with requirement of BHEL/customer.</p>
26.	<p>SUPPLIER PERFORMANCE MONITORING AND RATING SYSTEM: BHEL reserve the right for evaluation of Supplier Performance Rating as per Supplier Performance Monitoring and Rating System of BHEL for necessary action. Details are available at BHEL Website www.bhel.com for reference.</p>
27.	<p>DEALING WITH BANNED SUPPLIERS / CONTRACTORS IN BHEL: Offers of the bidders, who are on the banned list, as also the offers of the bidders who engage the services of the banned firms, shall be rejected. The list of banned firms is available on BHEL website www.bhel.com for reference.</p>
28.	<p>PACKING: Packing shall be in conformity with specifications and shall be such as to ensure prevention of damages, corrosion, deterioration, shortages, pilferage and loss in transit or storage.</p> <p>In case of shipment by sea or air, the packing shall be sea-worthy or air-worthy respectively and of international standards.</p> <p>Different types of spares i.e. start-up / commissioning spares and initial spares (mandatory spares and recommended O&M spares) are to be packed separately.</p> <p>Packing List shall be submitted as per standard format along with advance set of documents for claiming payment which shall also indicate: -</p> <ol style="list-style-type: none"> Case / Packing size (as applicable). Gross weight and net weight of each package. Detailed contents of the package with quantity of each item separately. <p>Project, Item / Package Description, BHEL’s PO No. with date & Case / Packing Mark should also be clearly mentioned on the Case / Packing and Packing List for identification. Also, Packing List must be duly signed & should include respective Invoice No. & LR No.</p>
29.	<p>COLOUR CODING: Aluminium stickers are required to be attached to large components but plastic sheet tags should be tied with small components, giving details like purchase order, description of the component, quantity etc.</p> <p>Tags should be of the colour as follows :-</p> <ol style="list-style-type: none"> Main equipment : Yellow or White tag Start-up / Commissioning spares : Blue tag Mandatory spares : Pink or Red tag

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	d) Recommended / O&M spares : Green tag			
30.	<p>MICRO, SMALL & MEDIUM ENTERPRISES (MSME) : MSMED Act 2006 as amended from time to time & extant regulations of Govt. of India for MSME will be applicable.</p> <p>Micro & Small Enterprises (MSE) can avail the intended benefits only if they submit along with the offer / bid, attested copies of either Acknowledgement of Entrepreneur Memorandum Part-II (EM-II certificate) having deemed validity (five years from the date of issue of acknowledgement in EM-II) or valid NSIC certificate or EM-II certificate along with attested copy of a CA certificate (As per BHEL format where deemed validity of EM-II certificate of five years have expired) applicable for the relevant financial year (latest audited). Date to be reckoned for determining the deemed validity will be the date of opening (for Techno-commercial Bid : Part-I in case of two part bid). Non-submission of such documents will lead to consideration of their bid at par with other bidders. No benefit shall be applicable for this enquiry if any deficiency in the above required documents are not submitted before price bid opening. If the tender is to be submitted through e-procurement portal, then the above required documents are to be uploaded on the portal. Documents should be notarized or attested (in original) by a Gazetted officer. Copy of Udyam Aadhar, Udyog Aadhaar Memorandum with Acknowledgement of Ministry of Micro, Small & Medium Enterprises should also be furnished.</p>			
31.	<p>BUSINESS ETHICS / SUSPENSION OF BUSINESS DEALINGS WITH SUPPLIERS / CONTRACTORS: If any bidder / supplier / contractor during pre-tendering / tendering / post tendering / award / execution / post-execution, indulges in malpractices cheating, bribery, fraud or other misconduct or formation of cartel so as to influence the bidding process or influences the price or fails to perform or is in default without any reasonable cause etc. or performs any act considered objectionable as per extant guidelines, action may be taken against such bidders/supplier/contractor as per extant "Guidelines for Suspension of Business Dealings with Suppliers/Contractors". Abridged version of same is available at BHEL website (www.bhel.com) on "Supplier Registration" Page.</p>			
32.	<p>REVERSE AUCTION: BHEL shall be resorting to Reverse Auction (RA) (Guidelines as available on www.bhel.com) for this tender. RA shall be conducted among all the techno-commercially qualified bidders. Price bids of all techno-commercially qualified bidders shall be opened and same shall be considered as initial bids of bidders in RA. In case any bidder(s) do(es) not participate in online Reverse Auction, their sealed envelope price bid along with applicable loading, if any, shall be considered for ranking." Abridged Version of "Guidelines for Reverse Auction-2021" may also be seen at BHEL website (www.bhel.com) on "Supplier Registration" Page.</p> <p>Abridged Version of "Guidelines for Reverse Auction-2021" is attached as Annexure-XVI along with NIT.</p>			
33.	<p>INTEGRITY PACT: Bidders shall have to enter into Integrity Pact with BHEL, duly signed Annexure-XI with seal in original, if specified in NIT / RFQ failing which bidder's offer shall be liable for rejection.</p> <p>(a) IP is a tool to ensure that activities and transactions between the Company and its Bidders/ Contractors are handled in a fair, transparent and corruption free manner.</p> <p>Following Independent External Monitors (IEMs) on the present panel have been appointed by BHEL with the approval of CVC to oversee implementation of IP in BHEL.</p> <table border="1" data-bbox="371 1885 1328 1915"> <tr> <td data-bbox="371 1885 451 1915">SI</td> <td data-bbox="451 1885 1008 1915">IEM</td> <td data-bbox="1008 1885 1328 1915">Email</td> </tr> </table>	SI	IEM	Email
SI	IEM	Email		

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Sr. No.															
	1	Shri Otem Dai, IAS (Retd.)	iem1@bhel.in												
	2	Shri Bishwamitra Pandey, IRAS (Retd.)	iem2@bhel.in												
	3	Shri Mukesh Mittal, IRS (retd.)	iem3@bhel.in												
	<p>(b) The IP as enclosed with the tender is to be submitted (duly signed by authorized signatory) along with techno-commercial bid (Part-I, in case of two/ three part bid). Only those bidders who have entered into such an IP with BHEL would be competent to participate in the bidding. In other words, entering into this Pact would be a preliminary qualification.</p> <p>(c) Please refer Section-8 of IP for Role and Responsibilities of IEMs. In case of any complaint arising out of the tendering process, the matter may be referred to any of the above IEM(s). All correspondence with the IEMs shall be done through email only.</p> <p>Note: No routine correspondence shall be addressed to the IEM (phone/ post/ email) regarding the clarifications, time extensions or any other administrative queries, etc on the tender issued. All such clarification/ issues shall be addressed directly to the tender issuing (procurement) department's officials whose contact details are provided below:</p> <p>Details of contact person(s):</p> <table border="0"> <tr> <td>(1)</td> <td>(2)</td> </tr> <tr> <td>Name: Mr. Manish Jain</td> <td>Name: Mr. Sunil Kumar</td> </tr> <tr> <td>Deptt: TBMM</td> <td>Deptt: TBMM</td> </tr> <tr> <td>Address: BHEL Noida</td> <td>Address: BHEL Noida</td> </tr> <tr> <td>Phone: 0120 674 8484</td> <td>Phone: 0120 674 8471</td> </tr> <tr> <td>Email: manish.jain@bhel.in</td> <td>Email: sunil.kumar@bhel.in</td> </tr> </table>			(1)	(2)	Name: Mr. Manish Jain	Name: Mr. Sunil Kumar	Deptt: TBMM	Deptt: TBMM	Address: BHEL Noida	Address: BHEL Noida	Phone: 0120 674 8484	Phone: 0120 674 8471	Email: manish.jain@bhel.in	Email: sunil.kumar@bhel.in
(1)	(2)														
Name: Mr. Manish Jain	Name: Mr. Sunil Kumar														
Deptt: TBMM	Deptt: TBMM														
Address: BHEL Noida	Address: BHEL Noida														
Phone: 0120 674 8484	Phone: 0120 674 8471														
Email: manish.jain@bhel.in	Email: sunil.kumar@bhel.in														
34.	<p>TERMINATION OF CONTRACT: BHEL shall have the right to cancel the Purchase Order / Contract without any financial implication to BHEL if vendor approval by end user / customer is withdrawn or in case of Suspension of Business Dealings with the Suppliers / Contractors by BHEL.</p> <p>BHEL shall have the right to cancel Purchase Order / Contract, wholly or in part, in case they are obliged to do so on account of any decline, diminution, curtailment or stoppage of their business and in that event, the Supplier's / Contractor' compensation claim shall be settled mutually.</p>														
35.	Deleted														
36.	<p>LIMITATION OF LIABILITY: Notwithstanding any other provisions, except in cases of wilful misconduct and / or criminal negligence / acts,</p> <p>a) Neither the Supplier / Contractor nor BHEL shall be liable to the other, whether in Purchase Order / Contract, tort, or otherwise, for any consequential loss or damage, loss of use, loss of production or loss of profits or interest costs, provided however that this exclusion shall not apply to any obligation of the Supplier / Contractor to pay Liquidated Damages to the BHEL and</p> <p>b) Notwithstanding any other provisions incorporated elsewhere in the contract, the aggregate liability of the Contractor in respect of this contract, whether under the Contract, in tort or otherwise, shall not exceed total Contract Price, provided however that this limitation shall not apply to any obligation of the Vendor to indemnify BHEL with respect to Patent Infringement or Intellectual Property Rights.</p>														
37.	<p>SHORTAGES / DAMAGES: Any shortages and / or damages in supplies shall be supplied / replenished free of cost by the supplier as early as possible but not later than 30 days from the date of intimation by BHEL to the supplier.</p> <p>Note: There shall not be any extension in the contractual delivery time / schedule</p>														

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	due to any shortages and / or damages in supplies.
38.	<p>VARIATION OF CONTRACT VALUE / QUANTITY VARIATION: BHEL shall have the right to variation in quantities of items within $\pm 30\%$ of the total Rate Contract value at the time of award of Rate Contract on overall basis within validity period of Rate Contract. No compensation is payable due to variation in the quantities and the Supplier / Contractor shall be bound to accept the same the contracted prices / rates without any escalation.</p>
39.	<p>STATUTORY VARIATION: GST rates prevailing at the time of dispatch of goods/ completion of services shall be payable by BHEL. All other taxes, duties, charges, royalty, cess, other levies shall be deemed to be included in the Ex Works Prices /Charges quoted by bidders and no variations shall be payable in respect thereof. No other variations such as on customs duty, exchange rate, minimum wages, prices of controlled commodities, any other input etc. shall be payable by the BHEL.</p> <p>Notwithstanding anything above, where the actual completion of the supply / services occurs beyond the period stipulated in the Purchase Order / Contract or any extension thereof, variations referred to above, will be limited to the rates prevailing on the dates of such agreed completion periods only. For variations after the agreed completion periods, the Supplier / Contractor alone shall bear the impact for the upward revisions and for downward revisions BHEL shall be given the benefit of reduction in applicable taxes /GST. This will be without prejudice to the levy of Liquidated Damages for delay in delivery / completion.</p> <p>If new tax is introduced by Central/ State Govt/ Municipality becomes directly applicable on items specified in Bill of Quantities/Purchase Order/Contract, full reimbursements shall be made provided it becomes applicable on items specified in Bill of Quantities.</p> <p>However, any additional tax implication due to delay in delivery, beyond the Contractual Delivery, attributable to supplier shall be borne by supplier.</p>
40.	<p>MODE OF PAYMENT: Payment shall be made directly to the Supplier / Contractor by BHEL through NEFT / RTGS. Eligible MSME suppliers can also opt for receipt of payment through TReDs platform (RXIL). All the charges w.r.t platform shall be borne by supplier.</p>
41.	<p>CONFIDENTIALITY: Supplier / Contractor shall, at all times, undertake to maintain complete confidentiality of all data, information, software, drawings & documents etc. belonging to BHEL and also of systems, procedures, reports, input documents, manuals, results and any other BHEL documents discussed and / or finalized during the course of execution of Purchase Order / Contract.</p>
42.	<p>INDEMNIFICATION: The Supplier / Contractor shall indemnify and keep indemnified and hold harmless BHEL and its employees and officers from and against any and all claims, suits, actions or administrative proceedings, demands, losses, damages, costs and expenses and any other claim of whatsoever nature in respect of the death or injury of any person or loss of or damage to any property arising during the course and out of the execution of the Purchase Order / Contract.</p>
43.	<p>TITLE OF GOODS:</p> <p>a) Ownership of the equipment / material procured in India, shall be transferred to BHEL upon loading on to the mode of transport to be used for transportation of the said equipment / material from the works to the site / destination and upon endorsement of the dispatch documents in favour of BHEL.</p> <p>b) Ownership of the equipment / material to be imported into the country where the site is located, if not procured in India, shall be transferred to BHEL upon loading on the mode of transport to be used for transportation of the equipment / material</p>

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	<p>from the country of origin to that country / destination and upon endorsement of despatch document in favour of BHEL.</p> <p>c) Notwithstanding the transfer of ownership of the equipment / material, the responsibility for care and safe custody thereof together with the risk of loss or damage thereto for whatsoever reason shall remain with the Supplier.</p>
44.	<p>COMPLIANCE OF STATUTORY REQUIREMENTS: The vendor shall comply with all State and Central Laws / Acts, Statutory Rules, Regulations etc., as may be enacted by the Government during the tenure of the Purchase Order / Contract and having in force and applicable to the Purchase Order / Contract and nothing shall be done by the Supplier / Contractor in contravention of any Law / Act and / or Rules / Regulations, thereunder or any amendment thereof. The Supplier / Contractor shall pay all taxes, fees, licence charges / deposits, duties, tolls, royalty, commissions or other charges which may be levied on account of any of his operations connected with the Purchase Order / Contract. In case BHEL is constrained to make any of such payments, BHEL shall recover the same from the Supplier / Contractor either from moneys due to him or otherwise as deemed fit.</p>
45.	<p>ACCEPTANCE OF ORDER: Supplier should acknowledge and accept the Letter of Award / Purchase Order issued by BHEL within 7 days of the issue of Letter of Award / Purchase Order. In case of any discrepancy / typographical error in issue of Purchase Order / Contract, the agreed terms & conditions, scope of work, rates / prices for placement of PO / award of contract shall be applicable and BHEL reserves the right to issue amendment(s) to PO / Contract for correction of discrepancies / typographical errors in the PO / Contract at a later date.</p>
46.	<p>FRAUD PREVENTION POLICY: The Bidder along with its associate / collaborators / sub-contractors / sub-vendors / consultants / service providers shall strictly adhere to BHEL Fraud Prevention Policy displayed on BHEL website http://www.bhel.com and shall immediately bring to the notice of BHEL Management about any fraud or suspected fraud as soon as it comes to their notice.</p>
47.	<p>IMPORTANT INSTRUCTIONS: For Deemed Export/Export Projects / Projects where GST exemption is applicable and exemption certificate is applicable BHEL/Customer will provide exemption certificate in lieu of GST else GST shall be applicable.</p>
48.	<p>MAKE IN INDIA (PPP-MII) For this procurement, the local content to categorize a supplier as Class-I local supplier / class-II local supplier / Non-Local supplier and purchase preference to Class-I local supplier, is as defined in Public Procurement (Preference to Make in India), Order 2017 dated 04.06.2020, issued by DPIIT. In case of subsequent orders issued by the nodal ministry, changing the definition of local content for the items of the NIT, the same shall be applicable even if issued after issue of this NIT but before opening of part-II bids against this NIT.</p> <p>“Bidder to specify the percentage of local content as per the format of self-declaration for local content” as per Annexure-V.”</p> <p>“This tender is not a global tender and only Class-I suppliers as defined under the DPIIT order no. P-45021/2/2017-PP (BE-II) dated 04.06.2020 are eligible to bid in this tender. Bids received from Class II & Non- Local supplier shall be rejected.”</p> <p>Procurement under this bid is reserved for purchase from Class 1 local supplier as defined in public procurement (Preference to Make in India), Order 2017 as amended from time to time and its subsequent Orders/Notifications issued by concerned Nodal Ministry for specific Goods/Products. However, eligible micro and small enterprises will be allowed to participate. In case the bid value is more than Rs.10 Crore, the declaration relating to percentage of local content shall be certified</p>

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	by the statutory auditor or cost auditor, if the OEM is a company and by a practicing cost accountant or a chartered accountant for OEMs other than companies as per the Public Procurement (preference to Make-in -India) order 2017 dated 04.06.2020. Purchase preference to Micro and Small Enterprises clause will get precedence over this clause.
49.	<p>COMPLIANCE TO GOI ORDER FOR RESTRICTIONS UNDER RULE 144 (XI) OF GENERAL FINANCIAL RULES (GFRS), 2017</p> <p>Refer Clause at Annexure-VI and Certification at Annexure-VII / Annexure-VIII (whichever is applicable) regarding restrictions under Rule 144 (xi) of General Financial Rules (GFRs), 2017. Bidder to comply the clause and submit the certification. Non-compliance/ Non-submission of certification will lead to rejection of Offer.</p>
50.	<p>MOP CIRCULAR:</p> <p>Bidder to comply the MOP circular dated 02-07-2020 (Annexure-IX) and its subsequent amendment, if any, in prescribed format (Annexure-X). Non-compliance/ Non-submission will lead to rejection of Offer [Not Applicable for cases where local content is 100%]. Vendor to quote as per specified price format of NIT, otherwise their offer shall be liable to be rejected</p>
51.	<p>PREVENTION FOR CARTEL FORMATION:</p> <p>The Bidder declares that they will not enter into any illegal or undisclosed agreement or understanding, whether formal or informal with other Bidder(s). This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process. In case, the Bidder is found having indulged in above activities, suitable action shall be taken by BHEL as per extant policies/ guidelines</p>
52	<p>RATE CONTRACT VALIDITY:</p> <p>The Rate Contract shall be valid for ordering up to 24 Months from the Date of award of the Rate Contract.</p> <p>BHEL reserves the right to extend the validity of Rate contract up to a period of maximum three months beyond the initial validity of 24 months. Quantity increase, if any, will be exercised on pro-rata basis for the extended period.</p>
53.	<p>VALIDITY OF PURCHASE ORDER PLACED UNDER RATE CONTRACT:</p> <p>BHEL will issue separate Purchase orders as per project requirement specifying the quantity of each type of conductor.</p> <p>All orders placed within the Rate Contract Validity period have to be executed. However, Purchase orders shall be valid till 1 Year from the date of Purchase order (or) till validity period of Rate contract whichever is later.</p> <p>In exceptional cases, validity of Purchase Order may further be extended up to mutually agreed period.</p> <p>In case it is observed that there is reluctance of supplier to honour the supplies as per Purchase order terms and conditions, BHEL shall have the right to invoke Risk Purchase as per clause no. 22 of Rate Contract.</p>
54.	<p>EVALUATION / CONDITIONS FOR RATE CONTRACT:</p> <p>a) Allotment of job to any Vendor would be sole prerogative of TBG, BHEL & no representation in this regard shall be entertained. However, generally the allotment will be based on following:</p> <p>i) Capability of vendor in meeting delivery schedule of BHEL.</p>

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	<p>ii) Delivery performance of Vendor. iii) Delivery Capacity as available at the time of allotment. iv) Vendor approval by customer. v) L-1 Vendor will be given preference. However, BHEL, TBG reserves its right of allotment to any Vendor, with whom Rate Contract is entered, to meet its delivery requirement.</p> <p>b) The Rate Contract is proposed to be entered with Two [02] Nos. of Vendors with the quantity distribution in the ratio of 70:30. 70% quantity shall be awarded to original L1 vendor. The rates of Original L1 vendor shall be sequentially counter-offered to L2, L3, L4 and so on in that sequence. The balance 30% quantity shall be awarded to the L2 or L3 or L4 and so on, bidder whoever accepts the rate of the original L1 bidder in that sequence. In case the other bidders do not accept the business at L1 rates, then order for 100% business will be placed with the original L1 bidder.</p> <p>c) Purchase preference to Micro and Small Enterprises (MSEs): Purchase preference will be given to MSEs as defined in Public Procurement Policy for Micro and Small Enterprises (MSEs) Order, 2012 dated 23.03.2012 issued by Ministry of Micro, Small and Medium Enterprises and its subsequent Orders/Notifications issued by concerned Ministry. If the bidder wants to avail the Purchase preference, the bidder must be the manufacturer of the offered product in case of bid for supply of goods. Traders are excluded from the purview of Public Procurement Policy for Micro and Small Enterprises. In respect of bid for Services, the bidder must be the Service provider of the offered Service. Relevant documentary evidence in this regard shall be uploaded along with the bid in respect of the offered product or service. In a situation where original L-1 bidder is not a Micro and Small Enterprise, 60% quantity shall be awarded to L1 bidder. Thereafter, the lowest bidder (s) among MSE bidder (s) who has quoted within the price band of L-1 + 15% shall be invited to match the original L1 price for the remaining 40% quantity. In case such lowest eligible MSE bidder fails to match the L1 price, the next higher MSE bidder in ranking within the L1+15% shall be invited to match the L1 price for remaining 40% quantity and so on, and contract shall be awarded accordingly. In case no MSE bidder within the price band of L1+15% accept the L1 price, remaining 40% quantity shall be sequentially counter-offered and awarded as per sl. No. 54 (b) above.</p> <p>d) However, in case of award of Rate Contract, any actual distribution pattern cannot be committed as evaluation will be done among bidders with whom rate contract is entered, when the delivery location becomes known. Evaluation for each destination shall be done on 'total cost to BHEL' basis and purchase order shall be placed accordingly on L1 vendor for the specific requirement.</p> <p>e) Bidder should be registered in BHEL TBG. Non-registered bidder should apply for registration at https://supplier.bhel.in/. (i) Bidders, not registered with BHEL TBG, need to submit application for Assessment of Registration through Online supplier registration portal at: https://supplier.bhel.in/ and acknowledgement of submission of Supplier registration form to be submitted along with Part-I bid. (ii) Bidders who are registered with BHEL TBG need to submit registration letter / email along with Part-I bid. (iii) For Supplier Registration related queries, bidders may contact Sh. Satish Kumar Mohite, Sr. Engineer, TBMM-SDC, skmohite@bhel.in, 0120 674 8460. (iv) In case of bidders referred to point no (i) above, price bids of only those Bidders will be opened who are registered with BHEL TRANSMISSION GROUP (BHEL-TBG) (v) BHEL reserves the right to reject the offer even though bidder meets the</p>

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	prequalification criteria but is considered not qualified for grant of registration of by BHEL. Decision of BHEL will be final in this regard and shall be binding on the bidders. (vi) Supplier Evaluation team may also visit Works of Bidder for Assessment.
55.	SHORT CLOSURE OF RATE CONTRACT: BHEL reserves right to short close the Rate Contract at any point during the tenure of the Rate Contract without any compensation to Supplier / Contractor.
56.	TECHNICAL SPECIFICATION: TB-XXX-316-019 shall be applicable.
57.	PRE QUALIFYING CRITERIA FOR OPEN TENDER: 1. The Technical Pre-Qualification criteria is as per ANNEXURE-I (T) 2. The Financial Parameters for Pre-QUALIFYING CRITERIA shall be as per ANNEXURE-I (F) ;



ANNEXURE - I(T)


TECHNICAL QUALIFICATION REQUIREMENTName of Project: **VARIOUS (RATE CONTRACT)**Name of Customer: **VARIOUS (RATE CONTRACT)**Name of Item: **ACSR Moose, ACSR Bersimis, ACSR Zebra & AAC Bull Conductor**

TECHNICAL QUALIFICATION REQUIREMENT
Bidder should have manufactured and supplied at least 6 KM of ACSR type conductor and 2 KM of AAC type conductor during the last 5 years from the original scheduled date of bid opening.

SUPPORTING DOCUMENTS TO BE SUBMITTED BY BIDDER ALONG WITH TECHNICAL BID		
Sr	Required Criteria	Supporting Documents
1	Manufacturing	Approved GTP / Approved Quality Plan / Factory Inspection Test Report etc. establishing bidder as manufacturer of offered item
2	Supply	PO / Dispatch clearance / LR / Material Receipt certificate at site / etc. establishing bidder as proven supplier of offered item
3	Type Test	TTR approval from customer / Type Test Report etc. establishing successful type tested design


SHOBHNA SINGH
(SENIOR MANAGER)


VIVEK KAPIL (AGM)/

SANJEEV K SHRIVASTAVA (SDGM)


ARUNA GULATI
(HOD/AGM)

PREPARED BY

REVIEWED BY

APPROVED BY

ENQUIRY NO.:

ENQUIRY DATE:

ANNEXURE-I (F)

PRE QUALIFYING CRITERIA FOR OPEN TENDER (FINANCIAL)

(i) Bidder should have a minimum average audited annual turnover / Sales Value of **INR 150 LAKHS** for last three financial years 2019-20, 2020-21 & 2021-22 (or) 2018-19, 2019-20 & 2020-21 and should submit audited balance sheet and Profit & Loss Account Sheet of these years.

(ii) Bidder should have earned profit in at least one year during the last Three years for which turnover has been considered.

Annexure II - Activity Schedule

Project BHEL TBG/RATE CONTRACT
Item OVER HEAD CONDUCTORS

SN	Activity	Activity Time (in days)	Scope
1	PO Acceptance by Vendor	7	BY SUPPLIER
2	Input to Vendor from BHEL	7	BY BHEL
3	Submission of Documents necessary for getting manufacturing clearance like Drawings, Data sheet, Quality plan etc.	14	BY SUPPLIER
4	Manufacturing Clearance & CAT-A approval to Vendor after drawing submission	14	BHEL SCOPE
5	Manufacturing time & raising inspection call after CAT-A approval of drawings & Manufacturing Clearance by BHEL. 28 days has been taken for total quantity of 4km. This will change based on total PO quantity.(For calculation of manufacturing time refer note 1 below).	28	BY SUPPLIER
6	BHEL/Customer Inspection & Dispatch Clearance	14	BHEL SCOPE
7	Dispatch	7	BY SUPPLIER
	Total	84	days

Notes:

For total quantity of 4KM , manufacturing time of 28 days has been considered. Actual manufacturing time will be given based on calculation as under:-

- 1
- 1.aCase-1 Total Quantity of ACSR & AAC conductor=6km. Then Manufacturing time= $6KM/4KM*28$ days=42 Days
- 1.bCase-2 Total Quantity of ACSR & AAC conductor=5.5km. Then Manufacturing time= $5.5KM/4KM*28$ days=38.5=39 Days
- 1.cCase-3 Total Quantity of ACSR & AAC conductor=3km. Then Manufacturing time= $3KM/4KM*28$ days=21 Days
- 1.d Note:- if by calculation days are found to be in decimal it will be rounded to next higher integer.
- 2 Inspection call to be issued 2 weeks in advance.
- 3 Supplier must ensure the completeness and correctness of the requisite documents before submission for approval. Delay in approval on account of incomplete / inadequate information shall be the responsibility of supplier.
- 4 Vendor to ensure resubmission of drawings/documents within 1 weeks from the date of comment from BHEL. Any delay in resubmissions w.r.t 1 weeks shall be reduced from Activity No.5 as above.
- 5 Count of resubmissions shall be certified by TBEM and same shall be compensated in schedule by adding certified time or number for resubmissions.
- 6 Qty. to be offered for inspection should be in accordance within Delivery-schedule – lot. BHEL reserves the right not to entertain multiple inspection calls for a Delivery – lot and delay on this account shall be the responsibility of Supplier.

Signature & Seal of supplier

Annexure-III

Chec List for Supply bills

Name Of the Project							
Package Description							
Invoice No. & Date							
PO No. & date							
Sr. No	Documents Required	Copies	Check Points	Page no.	Vendor Remarks	Verification by MM	Verification by Fin
					(Y/N/NA)	(Y/N/NA)	(Y/N/NA)
1	Original for Buyer Invoice - GST compliant invoice	1 Original+2 Copy	1. Please ensure GST compliant invoice in original 2. Consignee address : BHEL C/o followed by site address 3. Item description and unit of quantity are matched with PO 4. Buyer address and GSTN No as required (TBG Noida or Nodal agency) 5. PO No and date, LR No and date, Vehicle No and Project name are 6. Invoiced quantity are not more than th PO quantity and MICC quantity 7. Ex works unit rate , Taxes and F&I rates are same as per PO 8. Signed and stamped by vendor				
2	Receipted LR (signed & stamped)/ confirmation from site regarding receipt of packages/ Boxes	1Original+2 Copy	1. Consignee address : BHEL C/o followed by Site address 2. In case of material purchased from sub vendor , Consignee address Vendor's name C/o BHEL C/o Site address 3. Vendor's Invoice no and Vehicle No are mentioned 4. No of boxes/No of packages are same as per Packing list 5. In case of and adverse remark on LR (Like shortages/damages/broken etc) , clarification from site/TBMM/TBCM is nedded 6. LR is readable 7. In case of photo copy, LR is verified by TBMM 8. LR date is after the date of MICC/(MDCC if issued) or same date				
3	Packing List - showing number of packages, and gross weight/net Weight (if applicable)	1Original+2 Copy	1. PO No and date, LR No and date, Invoice No and date, Site Name and address. Consignor and consignee address are mentior 2. Item description and quantity are matched with Invoice and PO 3. Signed and stamped by vendor 4. No of packages/ Item descriptions are matched with MRC and LR				
4	MICC from BHEL	1Original+2Copy	1. BHEL MICC has been issued prior to the date of dispatch or on same date 2. In case where MICC date is after the date of dispatch then MDCC date is same or prior to the date of dispatch 3. Project Name, PO,Po Date, Vendor's name and address is correct 4. Item description, Quantity and unit of quantity are same as per PO and 5. All hold point in MICC , if any, have been resolved before submission of bill 6. Signed and stamped by BHEL Executive 7. MICC and MDCC quantity are not less than Invoice quantity and cover all invoiced items.				
5	Guarantee Certificate	1 Original+2 Copy	1. Project Name, PO No., Invoice No , LR No and date are mentioned . 2. Guarantee Certificate is strictly matched with PO T&C 3. Signed and stamped by vendor				
6	Bank Guarantee	1 Copy	1. Ensure submission of BG directly from Bank before supply of material so that BG confirmation may be arranged before processing the bill 2. Bill can be processed only after receipt of BG confirmation directly from bank 3. It should be in the name of BHEL , TBG Noida with registered office address Siri Fort, New Delt 4. It should be in prescribed format. 5. BG value and valdity plus claim period should be minimum as specified in PO / RC. Please check before supply , If BG extension is required please arrange the same 6. Vendor's name address should be same as per PO 7. Po No / RC No and date should be correct				
7	Insurance Certifcate	1 Original+2 Copy	1. Invoice No and date, Vendor's Name,Place from Consignor to Consignee are mentioned 2. It has not been issued later than the LR date 3. Insured value is not less than the Invoice value 4. Signed and stamped by Insurance Company 5. In case of Open Insurance Policy, declaration has been submitted to Insurance Company as per declaration clause of Open policy and copy of or 6. In case of any discrepancy , consent of TBCM is required for processing the bill and amount will be deducted for invalid Insurance certific				
	PVC (If applicable) Invoice	1Original+2Copy	PVC (If applicable) Invoice is submitted along with the Despatch Invoice 1. PVC invoice is attached along with supply Invoice				

Chec List for Supply bills

Name Of the Project							
Package Description							
Invoice No. & Date							
PO No. & date							
Sr. No	Documents Required	Copies	Check Points	Page no.	Vendor Remarks	Verification by MM	Verification by Fin
					(Y/N/NA)	(Y/N/NA)	(Y/N/NA)
8	is submitted along with the Despatch Invoice	1	2. Calculation sheet and applicable PVC indices are also enclosed				
			3. If delay in delivery, then PVC indices are as per PO conditions.				
9	Material receipt Certificate	1	1. LR No and date, Invoice No and date, Vehicle No and date , Site Name and address are mentioned				
			2. Date of receipt of material				
			3. Item description and quantity are same as per Invoice / Packing List				
			4. It is signed and stamped by Site executive				
			5. In case of any shortages / damages / adverse remark , clarification is needed				
10	Other Documents		To be seen as per specific requirement of PO.				

(A) CONCILIATION (MODEL CONCILIATION CLAUSE FOR CONDUCTING CONCILIATION PROCEEDINGS UNDER THE BHEL CONCILIATION SCHEME, 2018)

The Parties agree that if at any time (whether before, during or after the arbitral or judicial proceedings), any Disputes (which term shall mean and include any dispute, difference, question or disagreement arising in connection with construction, meaning, operation, effect, interpretation or breach of the agreement, contract or the Memorandum of Understanding (whichever is inapplicable), which the Parties are unable to settle mutually), arise inter-se the Parties, the same may, be referred by either party to Conciliation to be conducted through Independent Experts Committee to be appointed by competent authority of BHEL from the BHEL Panel of Conciliators.

Notes:

1. No serving or a retired employee of BHEL/Administrative Ministry of BHEL shall be included in the BHEL Panel of Conciliators.
2. Any other person(s) can be appointed as Conciliator(s) who is/are mutually agreeable to both the parties from outside the BHEL Panel of Conciliators.

The proceedings of Conciliation shall broadly be governed by Part-III of the Arbitration and Conciliation Act 1996 or any statutory modification thereof and as provided in **Annexure-A to this GCC (Enclosed)**.

The Annexure-A together with its appendices will be treated as if the same is part and parcel hereof and shall be as effectual as if set out herein in these GCC.”

(B) ARBITRATION (WITH SOLE ARBITRATOR)

- 1.1. Except as provided elsewhere in this Contract, in case amicable settlement is not reached between the Parties, in respect of any dispute or difference; arising out of the formation, breach, termination, validity or execution of the Contract; or, the respective rights and liabilities of the Parties; or, in relation to interpretation of any provision of the Contract; or, in any manner touching upon the Contract, then, either Party may, by a notice in writing to the other Party refer such dispute or difference to the Sole Arbitrator and such Arbitrator appointed by Head of the BHEL Unit/Region/Division issuing the Contract.
- 1.2. The Arbitrator shall pass a reasoned award and the award of the Arbitrator shall be final and binding upon the Parties.
- 1.3. Subject as aforesaid, the provisions of Arbitration and Conciliation Act 1996 (India) and amended in 2015 and further amendment passed in 2019 or statutory modifications or re-enactments thereof and the rules made thereunder and for the time being in force shall apply to the arbitration proceedings under this clause. The seat of arbitration shall

be New Delhi. The language of arbitration shall be English and the documents shall be submitted in English.

- 1.4. The cost of arbitration shall initially be borne equally by the Parties subject to the final apportionment of the cost of the arbitration in the award of the Arbitrator.
- 1.5. Notwithstanding the existence or any dispute or differences and/or reference for the arbitration, the Contractor shall proceed with and continue without hindrance the performance of its obligations under this Contract with due diligence and expedition in a professional manner except where the Contract has been terminated by either Party in terms of this Contract.

1.6. **SETTLEMENT OF COMMERCIAL DISPUTES BETWEEN CPSES INTER SE AND CPSE(S) AND GOVERNMENT DEPARTMENT(S)/ ORGANISATION(S) – ADMINISTRATIVE MECHANISM FOR RESOLUTION OF CPSES DISPUTES (AMRCD) – REGARDING**

Vide Dept. of Public Enterprises OM No. F. No. 4(1)/2013-DPE(GM)/FTS-1835 dated 22.05.2018 it has been conveyed that *"To make the mechanism more effective and binding on the disputing parties, a new mechanism namely Administrative Mechanism for resolution of CPSEs Disputes (AMRCD) having two level (tier) structure has been evolved in consultation with various stakeholders to replace the existing PMA mechanism which stands wound up from the date of issue of this OM."* Accordingly, the existing Permanent Machinery of Arbitration (PMA) stands wound up with effect from 22.05.2018 and cases relating to disputes or differences relating to the interpretation and application of the provisions of commercial contract(s) between CPSEs / Port Trust / Central or State Government Department / Organisations (excluding disputes concerning Railways, Income Tax, Customs and Excise Departments) shall be taken up by either party for its resolution through Administrative Mechanism for Resolution of CPSEs Disputes (AMRCD).

(C) JURISDICTION AND GOVERNING LAWS

The Courts at New Delhi shall have exclusive jurisdiction over any matter arising out of or in connection with this Contract. This Contract shall be construed as per and be governed by the Laws of India.

ANNEXURE TO MODEL CONCILIATION CLAUSE FOR CONDUCT OF CONCILIATION UNDER THE BHEL CONCILIATION SCHEME, 2018

BRIEF PROCEDURE FOR CONDUCT OF CONCILIATION PROCEEDINGS

1. The proceedings of Conciliation shall broadly be governed by Part-III of the Arbitration and Conciliation Act 1996 or any statutory modification thereof and as provided herein:
2. The party desirous of resorting to Conciliation shall send an invitation/notice in writing to the other party to conciliate specifying all points of Disputes with details of the amount claimed. The party concerned shall not raise any new issue thereafter. Parties shall also not claim any interest on claims/counter-claims from the date of notice invoking Conciliation till the conclusion of the Conciliation proceedings.
3. The party receiving the invitation/notice for Conciliation shall within 30 days of receipt of the notice of Conciliation intimate its consent for Conciliation along with its counter-claims, if any.
4. The Conciliation in a matter involving claim or counter-claim (whichever is higher) up to Rs 5 crores shall be carried out by sole Conciliator nominated by BHEL while in a matter involving claim or counter-claim (whichever is higher) of more than Rs 5 crores Conciliation shall be carried out by 3 Conciliators nominated by BHEL.
5. The Parties shall be represented by only their duly authorized in-house executives/officers and neither Party shall be represented by a Lawyer.
6. The first meeting of the IEC shall be convened by the IEC by sending appropriate communication/notice to both the parties as soon as possible but not later than 30 days from the date of his/their appointment. The hearings in the Conciliation proceeding shall ordinarily be concluded within two (2) months and, in exceptional cases where parties have expressed willingness to settle the matter or there exists possibility of settlement in the matter, the proceedings may be extended by the IEC by a maximum of further 2 months with the consent of the Parties subject to cogent reasons being recorded in writing.
7. The IEC shall thereafter formulate recommendations for settlement of the Disputes supported by reasons at the earliest but in any case within

15 days from the date of conclusion of the last hearing. The recommendations so formulated along with the reasons shall be furnished by the IEC to both the Parties at the earliest but in any case within 1 month from the date of conclusion of the last hearing.

8. Response/modifications/suggestions of the Parties on the recommendations of the IEC are to be submitted to the IEC within time limit stipulated by the IEC but not more than 15 days from the date of receipt of the recommendations from the IEC.
9. In the event, upon consideration, further review of the recommendations is considered necessary, whether by BHEL or by the other Party, then, the matter can be remitted back to the IEC with request to reconsider the same in light of the issues projected by either/both the Parties and to submit its recommendations thereon within the following 15 days from the date of remitting of the case by either of the Parties.
10. Upon the recommendations by the Parties, with or without modifications, as considered necessary, the IEC shall be called upon to draw up the Draft Settlement Agreement in terms of the recommendations.
11. When a consensus can be arrived at between the parties only in regard to any one or some of the issues referred for Conciliation the draft Settlement Agreement shall be accordingly formulated in regard to the said Issue(s), and the said Settlement Agreement, if signed, by the parties, shall be valid only for the said issues. As regards the balance issues not settled, the parties may seek to resolve them further as per terms and conditions provided in the contract.
12. In case no settlement can be reached between the parties, the IEC shall by a written declaration, pronounce that the Conciliation between the parties has failed and is accordingly terminated.
13. Unless the Conciliation proceedings are terminated in terms of para 22 (b), (c) & (d) herein below, the IEC shall forward his/its recommendations as to possible terms of settlement within one (1) month from the date of last hearing. The date of first hearing of Conciliation shall be the starting date for calculating the period of 2 months.

14. In case of 3 members IEC, 2 members of IEC present will constitute a valid quorum for IEC and meeting can take place to proceed in the matter after seeking consent from the member who is not available. If necessary, videoconferencing may be arranged for facilitating participation of the members. However, the IEC recommendations will be signed by all members. Where there is more than one (1) Conciliator, as a general rule they shall act jointly. In the event of differences between the Members of IEC, the decision/recommendations of the majority of the Members of IEC shall prevail and be construed as the recommendation of the IEC.
15. The Draft Settlement Agreement prepared by the IEC in terms of the consensus arrived at during the Conciliation proceedings between the Parties shall be given by the IEC to both the parties for putting up for approval of their respective Competent Authority.
16. Before submitting the draft settlement agreement to BHEL's Competent Authority viz. the Board Level Committee on Alternative Dispute Resolution (BLCADR) for approval, concurrence of the other party's Competent Authority to the draft settlement agreement shall be obtained by the other party and informed to BHEL within 15 days of receipt of the final draft settlement agreement by it. Upon approval by the Competent Authority, the Settlement Agreement would thereafter be signed by the authorized representatives of both the Parties and authenticated by the members of the IEC.
17. In case the Draft Settlement Agreement is rejected by the Competent Authority of BHEL or the other Party, the Conciliation proceedings would stand terminated.
18. A Settlement Agreement shall contain a statement to the effect that each of the person(s) signing thereto (i) is fully authorized by the respective Party(ies) he/she represents, (ii) has fully understood the contents of the same and (iii) is signing on the same out of complete freewill and consent, without any pressure, undue influence.
19. The Settlement Agreement shall thereafter have the same legal status and effect as an arbitration award on agreed terms on the substance of the dispute rendered by an arbitral tribunal passed under section 30 of the Arbitration and Conciliation Act, 1996.
20. Acceptance of the Draft Settlement Agreement/recommendations of the Conciliator and/or signing of the Settlement Agreement by BHEL shall

however, be subject to withdrawal/closure of any arbitral and/or judicial proceedings initiated by the concerned Party in regard to such settled issues.

21. Unless otherwise provided for in the agreement, contract or the Memorandum of Understanding, as the case may be, in the event of likelihood of prolonged absence of the Conciliator or any member of IEC, for any reason/incapacity, the Competent Authority/Head of Unit/Division/Region/Business Group of BHEL may substitute the Conciliator or such member at any stage of the proceedings. Upon appointment of the substitute Conciliator(s), such reconstituted IEC may, with the consent of the Parties, proceed with further Conciliation into the matter either de-novo or from the stage already reached by the previous IEC before the substitution.

22. The proceedings of Conciliation under this Scheme may be terminated as follows:

- a. On the date of signing of the Settlement agreement by the Parties; or,
- b. By a written declaration of the IEC, after consultation with the parties, to the effect that further efforts at conciliation are no longer justified, on the date of the declaration; or,
- c. By a written declaration of the Parties addressed to the IEC to the effect that the Conciliation proceedings are terminated, on the date of the declaration; or,
- d. By a written declaration of a Party to the other Party and the IEC, if appointed, to the effect that the Conciliation proceedings are terminated, on the date of the declaration.
- e. On rejection of the Draft Settlement Agreement by the Competent Authority of BHEL or the other Party.

23. The Conciliator(s) shall be entitled to following fees and facilities:

Sl No	Particulars	Amount
1	Sitting fees	Each Member shall be paid a Lump Sum fee of Rs 75,000/- for the whole case payable in terms of paragraph No. 27 herein below.
2	Towards drafting of settlement agreement	In cases involving claim and/or counter-claim of up to Rs 5crores. Rs 50,000/- (Sole Conciliator)

Sl No	Particulars	Amount
		<p>In cases involving claim and/or counter-claim of exceeding Rs 5 crores but less than Rs 10 crores. Rs 75,000 (per Conciliator)</p> <p>In cases involving claim and/or counter-claim of more than Rs 10 crores. Rs 1,00,000/- (per Conciliator)</p> <p>Note: The aforesaid fees for the drafting of the Settlement Agreement shall be paid on Signing of the Settlement Agreement after approval of the Competent Authority or Rejection of the proposed Settlement Agreement by the Competent Authority of BHEL.</p>
3	Secretarial expenses	<p>Rs 10,000/- (one time) for the whole case for Conciliation by a Sole Member IEC.</p> <p>Where Conciliation is by multi member Conciliators –Rs 30,000/- (one time)- to be paid to the IEC</p>
4	<p>Travel and transportation and stay at outstation</p> <p>i) Retired Senior Officials of other Public Sector Undertakings (pay scale wise equivalent to or more than E-8 level of BHEL)</p>	<p>As per entitlement of the equivalent officer (pay scale wise) in BHEL.</p>
	Others	<p>As per the extant entitlement of whole time Functional Directors in BHEL.</p>

Sl No	Particulars	Amount
		Ordinarily, the IEC Member(s) would be entitled to travel by air Economy Class.
5	Venue for meeting	Unless otherwise agreed in the agreement, contract or the Memorandum of Understanding, as the case may be, the venue/seat of proceedings shall be the location of the concerned Unit / Division / Region / Business Group of BHEL. Without prejudice to the seat/venue of the Conciliation being at the location of concerned BHEL Unit / Division / Region / Business Group, the IEC after consulting the Parties may decide to hold the proceedings at any other place/venue to facilitate the proceedings. Unless, Parties agree to conduct Conciliation at BHEL premises, the venue is to be arranged by either Party alternately.

24. The parties will bear their own costs including cost of presenting their cases/evidence/witness(es)/expert(s) on their behalf. The parties agree to rely upon documentary evidence in support of their claims and not to bring any oral evidence in IEC proceedings.
25. If any witness(es) or expert(s) is/are, with the consent of the parties, called upon to appear at the instance of the IEC in connection with the matter, then, the costs towards such witness(es)/expert(s) shall be determined by the IEC with the consent of the Parties and the cost so determined shall be borne equally by the Parties.
26. The other expenditures/costs in connection with the Conciliation proceedings as well as the IEC's fees and expenses shall be shared by the Parties equally.
27. Out of the lump sum fees of Rs 75,000/- for Sitting Fees, 50% shall be payable after the first meeting of the IEC and the remaining 50% of the Sitting Fees shall be payable only after termination of the conciliation proceedings in terms of para 22 hereinabove.

28. The travelling, transportation and stay at outstation shall be arranged by concerned Unit as per entitlements as per Serial No. 3 of the Table at para 23 above, and in case such arrangements are not made by the BHEL Unit, the same shall be reimbursed to the IEC on actuals limited to their entitlement as per Serial No. 4 of the Table at Para 23 above against supporting documents. The IEC Member(s) shall submit necessary invoice for claiming the fees/reimbursements.
29. The Parties shall keep confidential all matters relating to the conciliation proceedings. Confidentiality shall extend also to the settlement agreement, except where its disclosure is necessary for purposes of its implementation and enforcement or as required by or under a law or as per directions of a Court/Governmental authority/regulatory body, as the case may be.
30. The Parties shall not rely upon or introduce as evidence in any further arbitral or judicial proceedings, whether or not such proceedings relate to the Disputes that is the subject of the Conciliation proceedings:
 - a. Views expressed or suggestions made by the other party in respect of a possible settlement of the Disputes;
 - b. admissions made by the other party in the course of the Conciliator proceedings;
 - c. proposals made by the Conciliator;
 - d. The fact that the other Party had indicated his willingness to accept a proposal for settlement made by the Conciliator.
31. The Parties shall not present the Conciliator(s) as witness in any Alternative Dispute Resolution or Judicial proceedings in respect of a Disputes that is/was the subject of that particular Conciliation proceeding.
32. None of the Conciliators shall act as an arbitrator or as a representative or counsel of a Party in any arbitral or judicial proceeding in respect of a Disputes that is/was the subject of that particular Conciliation proceeding.
33. The Parties shall not initiate, during the Conciliation proceedings, any arbitral or judicial proceedings in respect of a Disputes that is the subject matter of the Conciliation proceedings except that a Party may initiate arbitral or judicial proceedings where, in his opinion, such proceedings are necessary for preserving his rights including for preventing expiry of period of limitation. Unless terminated as per the provisions of this Scheme, the Conciliation proceedings shall continue

notwithstanding the commencement of the arbitral or judicial proceedings and the arbitral or judicial proceedings shall be primarily for the purpose of preserving rights including preventing expiry of period of limitation.

34. The official language of Conciliation proceedings under this Scheme shall be English unless the Parties agree to some other language.

Format 2 to BHEL Conciliation Scheme, 2018

**FORMAT FOR SEEKING CONSENT FOR REFERRING THE DISPUTES TO
CONCILIATION THROUGH IEC**

To,

M/s. (Stakeholder's name)

**Sub: Resolution of the Disputes through conciliation by Independent
Expert Committee (IEC).**

Ref: Contract No/MoU/Agreement/LOI/LOA& date _____.

Sir,

With reference to above referred Contract/MoU/Agreement/LOI/LOA, you have raised certain Disputes/claims. Vide your letter dated____ you have requested BHEL to refer the Disputes/claims to IEC for Conciliation.

We are enclosing herewith Format (3) for giving consent and the terms and conditions of BHEL Conciliation Scheme, 2018 governing conciliation through IEC. You are requested to give your unconditional consent to the said terms and conditions of the Scheme by returning the same duly sealed and signed on each page. On receipt of your consent, matter will be put to the Competent Authority for consideration and decision.

Please note that BHEL has also certain claims against you (if applicable). BHEL reserves its right to agree or not to agree conciliation of the said disputes through BHEL and this letter is being issued without prejudice to BHEL's rights and contentions available under the contract and law.

Yours faithfully,

Representative of BHEL

Format 3 to BHEL Conciliation Scheme, 2018
FORMAT FOR GIVING CONSENT BY
CONTRACTOR/VENDOR/CUSTOMER/COLLABORATOR/CONSORTIUM PARTNERS FOR REFERRING THE DISPUTES TO CONCILIATION THROUGH IEC

To,

BHEL

.....

Sub: Resolution of Disputes through Conciliation by Independent Expert Committee (IEC).

Ref: Contract/MoU/Agreement/LOI/LOA No & date____

With reference to above referred contract, our following bills/invoices/claims submitted to BHEL are still unpaid giving rise to Disputes:

SL. no.	Claim Description	Bill submitted to BHEL (no. and date)	Amount of the bill/claim	Amount received from BHEL	Outstanding Amount

Accordingly we request you to kindly refer the Disputes in respect of above claims to IEC for Conciliation.

We hereby agree and give our unconditional consent to the terms and conditions of BHEL Conciliation Scheme, 2018 governing conciliation through IEC. We have signed the same on each page and enclosed it for your consideration.

Yours faithfully,

(Signature with stamp)

Authorized Representative of Contractor

Name, with designation

Date

Format 5 to BHEL Conciliation Scheme, 2018
STATEMENT OF CLAIMS/COUNTER CLAIMS TO BE SUBMITTED TO
THE IEC BY BOTH THE PARTIES

1. Chronology of the Disputes
2. Brief of the Contract/MoU/Agreement/LOI/LOA
3. Brief history of the Disputes:
4. Issues:
5. Details of Clam(s)/Counter Claim(s):

SI. No.	Description of claim(s)/Counter Claim	Amount (in INR)Or currency applicable in the contract	Relevant contract clause

6. Basis/Ground of claim(s)/counter claim(s) (along with relevant clause of contract)

Note– *The Statement of Claims/Counter Claims may ideally be restricted to maximum limit of 20 pages. Relevant documents may be compiled and submitted along with the statement of Claims/Counter Claims. The statement of Claims/Counter Claims is to be submitted to all IEC members and to the other party by post as well as by email.*

Item/Package Name :	
Enquiry No.:	
Project:	
Type of project	
Percentage of Local Content	<i>(Bidder to enter the applicable % of local content)</i>

Self-certification to be submitted in INR 100/- non judicial stamp paper

Format of Self certification regarding Local Content in line with PPP-MII order, 2017 & its revision dated 04.06.2020 and any subsequent modification/Amendment, if any.

Date:.....

I _____ S/o, D/o, W/o, _____ Resident of _____ hereby solemnly affirm and declare as under:

That I will agree to abide by the terms and conditions of the Public Procurement (Preference to Make in India) Order, 2017 (*hereinafter PPP-MII order*) of Government of India issued vide Notification No: P-45021/2/2017-BE-II dated 15/06/2017, its revision dated 04/06/2020 and any subsequent modifications/ Amendments, if any.

That the information furnished hereinafter is correct to the best of my knowledge and belief and I undertake to produce relevant records before the procuring entity/ BHEL or any other Government authority for the purpose of assessing the local content of goods/services/works supplied by me for *(Enter the name of the Equipment/Item for Project)*.

That the local content for all inputs which constitute the said goods/services/works has been verified by me and I am responsible for the correctness of the claims made therein.

That the goods/services/works supplied by me for *(Enter the name of the Equipment/Item for Project)* **contains.....%** *(mention the Local content in %age)* Local Content.

That the value addition for the purpose of meeting the 'Minimum Local Content' has been made by me at *(Enter the details of the location(s) at which value addition is made)*.

That in the event of the local content of the goods/services/works mentioned herein is found to be incorrect and not meeting the prescribed supplier class categorization criteria as per said order, based on the assessment of procuring agency (ies)/ BHEL/ Government Authorities for the purpose of assessing the local content, action shall be taken against me in line with the PPP-MII order and provisions of the Integrity pact/ Bidding Documents.

I agree to maintain the following information in the Company's record for a period of 8 years and shall make this available for verification to any statutory authority.

- i Name and details of the Local Supplier
(Registered Office, Manufacturing unit location, nature of legal entity)
- ii. Date on which this certificate is issued

Item/Package Name :	
Enquiry No.:	
Project:	
Type of project	
Percentage of Local Content	<i>(Bidder to enter the applicable % of local content)</i>

Self-certification to be submitted in INR 100/- non judicial stamp paper

- iii. Goods/services/works for which the certificate is produced
- iv. Procuring entity to whom the certificate is furnished
- v. Percentage of local content claimed and whether it meets the Minimum Local Content prescribed
- vi. Name and contact details of the unit of the Local Supplier (s)
- vii. Sale Price of the product
- viii. Ex-Factory Price of the product
- ix. Freight, insurance and handling
- x. Total Bill of Material
- xi. List and total cost value of input used to manufacture the Goods/to provide services/in construction of works
- xii. List and total cost of input which are domestically sourced. Value addition certificates from suppliers, if the input is not in-house to be attached
- xiii. List and cost of inputs which are imported, directly or indirectly

For and on behalf of..... (Name of firm/entity)

Authorized signatory (To be duly authorized by the Board of Directors)

<Insert Name, Designation and Contact No.>

Clause regarding regarding restrictions under Rule 144 (XI) of the General Financial Rules (GFRs), 2017 as per Government of India order OM No.6/18/2019-PPD dated 23.07.2020

- I. Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority.
- II. "Bidder" (including the term 'tenderer', 'consultant' or 'service provider' in certain contexts) means any person or firm or company including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not failing in any of the descriptions of bidders stated hereinbefore, including any agency branch or office controlled by such person, participating in a procurement process.
- III. "Bidder from a country which shares a land border with India" for the purpose of this Order means:
 - a. An entity Incorporated, established or registered in such a country; or
 - b. A subsidiary of an entity Incorporated, established or registered in such a country; or
 - c. An entity substantially controlled through entitles incorporated, established or registered in such a country; or
 - d. An entity whose *beneficial owner* is situated in such a country, or
 - e. An Indian (or other) agent of such an entity; or
 - f. A natural person who is a citizen of such a country; or
 - g. A consortium or joint venture where any member of the consortium or joint venture falls under any of the above
- IV. The *beneficial owner* for the purpose of (iii) above will be as under:
 1. In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has a controlling ownership interest or who exercises control through other means.
Explanation-
 - a. "Controlling ownership interest" means ownership of or entitlement to more than twenty-five per cent. of shares or capital or profits of the company;
 - b. "Control" shall include the right to appoint majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholder's agreements or voting agreements;
 2. In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership;
 3. In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of Individuals;
 4. Where no natural person is Identified under (1) or (2) or (3) above the beneficial owner is the relevant natural person who holds the position of senior managing official;
 5. In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.
- V. An Agent is a person employed to do any act for another or to represent another in dealings with third person.

Clause regarding regarding restrictions under Rule 144 (XI) of the General Financial Rules (GFRs), 2017 as per Government of India order OM No.6/18/2019-PPD dated 23.07.2020

VI. The successful bidder shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority.

** The above clause is not applicable to the bidders from those countries (even if sharing a land border with India) to which the GoI has extended lines of credit or in which the GoI is engaged in development projects.*

* List of countries to which lines of credit have been extended or in which development projects are undertaken are available on the Ministry of External affairs website (<https://www.mea.gov.in/>)

Compliance to be submitted in INR 100/- non judicial stamp paper

Sub: Compliance to Government of India order OM No.6/18/2019-PPD dated 23.07.2020 regarding restrictions under Rule 144 (XI) of the General Financial Rules (GFRs), 2017

Sl No.	Description	Bidder's confirmation
1	<i>We, M/s _____ have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; We hereby certify that we are not from such a country.</i>	<i>Agreed</i>

(Note: Non-compliance of above said GoI Order and its subsequent amendment, (if any), by any bidder(s) shall lead for commercial rejection of their bids by BHEL)

Bidder's authorized signatory with stamp & seal

Compliance to be submitted in INR 100/- non judicial stamp paper

Sub: Compliance to Government of India order OM No.6/18/2019-PPD dated 23.07.2020 regarding restrictions under Rule 144 (XI) of the General Financial Rules (GFRs), 2017

SI No.	Description	Bidder's confirmation
1	<p><i>We, M/s_____ have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India. We are from such a country which shares a land border with India & have been registered with the Competent Authority as specified in above said order. We hereby certify that we fulfil all requirements in this regard and are eligible to be considered.</i></p> <p><i>Evidence of valid registration by the Competent Authority is attached.</i></p>	<p align="center"><i>Agreed</i></p>

(Note: Non-compliance of above said GoI Order and its subsequent amendment, (if any), by any bidder(s) shall lead for commercial rejection of their bids by BHEL)

Bidder's authorized signatory with stamp & seal

No.25-111612018-PG
Government of India
Ministry of Power
Shram Shakti Bhawan, Rafi Marg, New Delhi • — 110001
Tele Fax: 011-23730264

Dated 02/07/2020

ORDER

Power Supply System is a sensitive and critical infrastructure that supports not only our national defence, vital emergency services including health, disaster response, critical national infrastructure including classified data & communication services, defence installations and manufacturing establishments, logistics services but also the entire economy and the day-to-day life of the citizens of the country. Any danger or threat to Power Supply System can have catastrophic effects and has the potential to cripple the entire country. Therefore, the Power Sector is a strategic and critical sector.

The vulnerabilities in the Power Supply System & Network mainly arise out of the possibilities of cyber attacks through malware / Trojans etc. embedded in imported equipment. Hence, to protect the security, integrity and reliability of the strategically important and critical Power Supply System & Network in the country, the following directions are hereby issued:-

1. All equipment, components, and parts imported for use in the Power Supply System and Network shall be tested in the country to check for any kind of embedded malware/trojans/cyber threat and for adherence to Indian Standards.
2. All such testings shall be done in certified laboratories that will be designated by the Ministry of Power (MOP).
3. Any import of equipment/components/parts from "prior reference" countries as specified or by persons owned by, controlled by, or subject to the jurisdiction or the directions of these "prior reference" countries will require prior permission of the Government of India
4. Where the equipment/components/parts are imported from "prior reference" countries, with special permission, the protocol for testing in certified and designated laboratories shall be approved by the Ministry of Power (MOP).

This order shall apply to any item imported for end use or to be used as a component, or as a part in manufacturing, assembling of any equipment or to be used in power supply system or any activity directly or indirectly related to power supply system.

This issues with the approval of Hon'ble Minister of State for Power and New & Renewable Energy (Independent Charge).



(Goutam Ghosh)

Director Tel: 011-23716674 To:

1. All Ministries/Departments of Government of India (As per list)
2. Secretary (Coordination), Cabinet Secretariat
3. Vice Chairman, NITI Aayog

सेवा भवन, आर. के. पुरम-I, नई दिल्ली-110066 टेली: 011-26732257 ईमेल: ce-rndcea@nic.in वेबसाइट:
www.cea.nic.in

Sewa Bhawan, R.K Puram-I, New Delhi-110066 Tele: 011-26732257 Email: ce-rndcea@nic.in Website: www.cea.nic.in

Vendor Compliance format in bidder letter head

In view of order No. 25-111612018-PG, Dated 02.07.2020 of Ministry of Power, GOI

Enquiry No/ PO No & Date :
Project :
Name of items/Package :

This is to certify that all equipment, components, and parts imported for use in the Power Supply System and Network are in strict compliance to directions issued by Ministry of Power, Govt. of India vide order No. 25-111612018-PG dated 02.07.2020. The imported component(s), part or assembly item(s) does not carry any malware/Trojan etc.

Note: Non-compliance of MoP Order and its subsequent amendment(s), (if any), by vendor shall lead to rejection of their offer or cancellation of contract, which is awarded by BHEL.

Bidder's authorized signatory
with stamp & seal

INTEGRITY PACT**ANNEXURE XI****Between**

Bharat Heavy Electricals Ltd. (BHEL), a company registered under the Companies Act 1956 and having its registered office at "BHEL House", Siri Fort, New Delhi - 110049 (India) hereinafter referred to as "The Principal", which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the ONE PART

and

_____, (description of the party along with address), hereinafter referred to as "The Bidder/ Contractor" which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the OTHER PART

Preamble

The Principal intends to award, under laid-down organizational procedures, contract/s for

_____. The Principal values full compliance with all relevant laws of the land, rules and regulations, and the principles of economic use of resources, and of fairness and transparency in its relations with its Bidder(s)/ Contractor(s).

In order to achieve these goals, the Principal will appoint Independent External Monitor(s), who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

Section 1- Commitments of the Principal

1.1 The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:-

1.1.1 No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.

1.1.2 The Principal will, during the tender process treat all Bidder(s) with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential/ additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.

1.1.3 The Principal will exclude from the process all known prejudiced persons.

1.2 If the Principal obtains information on the conduct of any of its employees which is a penal offence under the Indian Penal Code 1860 and Prevention of Corruption Act 1988 or any other statutory penal enactment, or if there be a substantive suspicion in this regard, the Principal will inform its Vigilance Office and in addition can initiate disciplinary actions:

Section 2 - Commitments of the Bidder(s)/ Contractor(s)

- 2.1 The Bidder(s)/ Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.
- 2.1.1 The Bidder(s)/ Contractor(s) will not, directly or through any other person or firm, offer, promise or give to the Principal or to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material, immaterial or any other benefit which he/ she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.
- 2.1.2 The Bidder(s)/ Contractor(s) will not enter with other Bidder(s) into any illegal or undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.
- 2.1.3 The Bidder(s)/ Contractor(s) will not commit any penal offence under the relevant Indian Penal Code (IPC) and Prevention of Corruption Act; further the Bidder(s)/ Contractor(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
- 2.1.4 Foreign Bidder(s)/ Contractor(s) shall disclose the name and address of agents and representatives in India and Indian Bidder(s)/ Contractor(s) to disclose their foreign principals or associates. The Bidder(s)/ Contractor(s) will, when presenting his bid, disclose any and all payments he has made, and is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
- 2.2 The Bidder(s)/ Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.
- 2.3 The Bidder(s)/ Contractor(s) shall not approach the Courts while representing the matters to IEMs and will await their decision in the matter.

Section 3 - Disqualification from tender process and exclusion from future contracts

If the Bidder(s)/ Contractor(s), before award or during execution has committed a transgression through a violation of Section 2 above, or acts in any other manner such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Bidder(s)/ Contractor(s) from the tender process or take action as per the separate "Guidelines on Banning of Business dealings with Suppliers/ Contractors", framed by the Principal.

Section 4 - Compensation for Damages

- 4.1 If the Principal has disqualified the Bidder from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover the damages equivalent Earnest Money Deposit/ Bid Security.
- 4.2 If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to section 3, the Principal shall be entitled to

demand and recover from the Contractor liquidated damages equivalent to 5% of the contract value or the amount equivalent to Security Deposit/ Performance Bank Guarantee, whichever is higher.

Section 5 - Previous Transgression

- 5.1 The Bidder declares that no previous transgressions occurred in the last 3 years with any other company in any country conforming to the anti-corruption approach or with any other Public Sector Enterprise in India that could justify his exclusion from the tender process.
- 5.2 If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

Section 6 - Equal treatment of all Bidders/ Contractors / Sub-contractors

- 6.1 The Principal will enter into agreements with identical conditions as this one with all Bidders and Contractors. In case of sub-contracting, the Principal contractor shall be responsible for the adoption of IP by his sub-contractors and shall continue to remain responsible for any default by his sub-contractors.
- 6.2 The Principal will disqualify from the tender process all bidders who do not sign this pact or violate its provisions.

Section 7 - Criminal Charges against violating Bidders/ Contractors /Subcontractors

If the Principal obtains knowledge of conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the Vigilance Office.

Section 8 - Independent External Monitor(s)

- 8.1 The Principal appoints competent and credible Independent External Monitor for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.
- 8.2 The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the CMD, BHEL.
- 8.3 The Bidder(s)/ Contractor(s) accepts that the Monitor has the right to access without restriction to all contract documentation of the Principal including that provided by the Bidder(s)/ Contractor(s). The Bidder(s)/ Contractor(s) will grant the monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his contract documentation. The same is applicable to Sub-contractor(s). The Monitor is under contractual obligation to treat the information and documents of the Bidder(s)/ Contractor(s) / Sub-contractor(s) with confidentiality in line with Non- disclosure agreement.
- 8.4 The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the contract provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.

- 8.5 The role of IEMs is advisory, would not be legally binding and it is restricted to resolving issues raised by an intending bidder regarding any aspect of the tender which allegedly restricts competition or bias towards some bidders. At the same time, it must be understood that IEMs are not consultants to the Management. Their role is independent in nature and the advice once tendered would not be subject to review at the request of the organization.
- 8.6 For ensuring the desired transparency and objectivity in dealing with the complaints arising out of any tendering process, the matter should be examined by the full panel of IEMs jointly as far as possible, who would look into the records, conduct an investigation, and submit their joint recommendations to the Management.
- 8.7 The IEMs would examine all complaints received by them and give their recommendations/ views to CMD, BHEL, at the earliest. They may also send their report directly to the CVO and the Commission, in case of suspicion of serious irregularities requiring legal/ administrative action. IEMs will tender their advice on the complaints within 10 days as far as possible.
- 8.8 The CMD, BHEL shall decide the compensation to be paid to the Monitor and its terms and conditions.
- 8.9 IEM should examine the process integrity, they are not expected to concern themselves with fixing of responsibility of officers. Complaints alleging mala fide on the part of any officer of the organization should be looked into by the CVO of the concerned organisation.
- 8.10 If the Monitor has reported to the CMD, BHEL, a substantiated suspicion of an offence under relevant Indian Penal Code/ Prevention of Corruption Act, and the CMD, BHEL has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Office, the Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.
- 8.11 The number of Independent External Monitor(s) shall be decided by the CMD, BHEL.
- 8.12 The word 'Monitor' would include both singular and plural.

Section 9 - Pact Duration

- 9.1 This Pact shall be operative from the date IP is signed by both the parties till the final completion of contract for successful bidder and for all other bidders 6 months after the contract has been awarded. Issues like warranty / guarantee etc. should be outside the purview of IEMs.
- 9.2 If any claim is made/ lodged during currency of IP, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged/ determined by the CMD, BHEL.

Section 10 - Other Provisions

- 10.1 This agreement is subject to Indian Laws and jurisdiction shall be registered office of the Principal, i.e. New Delhi.

- 10.2 Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.
- 10.3 If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.
- 10.4 Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
- 10.5 Only those bidders / contractors who have entered into this agreement with the Principal would be competent to participate in the bidding. In other words, entering into this agreement would be a preliminary qualification.

For & On behalf of the Principal

For & On behalf of the Bidder/

Contractor

(Office Seal)

(Office Seal)

Place-----

Date-----

Witness:_____

Witness:_____

(Name & Address) _____

(Name & Address) _____

RISK PURCHASE

1.1. In case the Supplier / Contractor fails to supply or fails to comply with terms & conditions of the Purchase Order / Contract or delivers equipment / material not of the contracted quality or fails to adhere to the contract specifications or fails to perform as per the activity schedule and there are sufficient reasons even before expiry of the delivery / completion period to justify that supplies shall be inordinately delayed beyond contractual delivery / completion period, BHEL reserve the right to cancel the Purchase Order / Contract either in whole or in part thereof without compensation to Supplier / Contractor and if BHEL so desires, may procure such equipment / material / items not delivered or others of similar description where equipment / material / items exactly complying with particulars are not readily procurable in the opinion of BHEL which is final and in such manner as deemed appropriate, at the risk and cost of the Supplier / Contractor and the Supplier / Contractor shall be liable to BHEL for any excess cost to BHEL. However, the Supplier / Contractor shall continue execution of the Purchase Order / Contract to the extent not cancelled under the provisions of this clause.

1.2. Risk & Cost Clause, in line with Conditions of Contract may be invoked in any of the following cases:

- i) Contractor/ supplier's poor progress of the work vis-à-vis execution timeline as stipulated in the Contract, backlog attributable to contractor/ supplier including unexecuted portion of work/ supply does not appear to be executable within balance available period considering its performance of execution.
- ii) Withdrawal from or abandonment of the work by contractor/supplier before completion as per contract.
- iii) Non completion of work/ Non-supply by the Contractor/ supplier within scheduled completion/delivery period as per Contract or as extended from time to time, for the reasons attributable to the contractor/ supplier.
- iv) Termination of Contract on account of any other reason(s) attributable to Contractor/ Supplier.
- v) Assignment, transfer, subletting of Contract without BHEL's written permission resulting in termination of Contract or part thereof by BHEL.
- vi) Non-compliance to any contractual condition or any other default attributable to Contractor/ Supplier.

1.3. **Risk and Cost amount against Balance Work:**

In case Risk & Cost is invoked, the amount of Risk & Cost against balance work shall be calculated as under:

$$\text{Risk \& Cost Amount} = [(A-B) + (A \times H/100)]$$

Where,

A= Value of Balance scope of Work/ Supply (*) as per rates of new contract

B= Value of Balance scope of Works/ Supply (*) as per rates of old contract being paid to the contractor/ supplier at the time of termination of contract i.e. inclusive of PVC & ORC, if any.

H = Overhead Factor to be taken as 5 (five)

In case (A-B) is less than 0 (zero), value of (A-B) shall be taken as 0 (zero).

***(Balance scope of work/ supply)**

Difference of Contract Quantities and Executed Quantities as on the date of issue of Letter for 'Termination of Contract', shall be taken as balance scope of Work / Supply for calculating risk & cost amount.

Contract quantities are the quantities as per original contract. If, Contract has been amended, quantities as per amended Contract shall be considered as Contract Quantities.

Items for which total quantities to be executed have exceeded the Contract Quantities based on drawings issued to contractor from time to time till issue of Termination letter, then for these items total Quantities as per issued drawings would be deemed to be contract quantities.

Substitute/ extra items whose rates have already been approved would form part of contract quantities for this purpose. Substitute/ extra items which have been executed but rates have not been approved, would also form part of contract quantities for this purpose and rates of such items shall be determined in line with contractual provisions.

However, increase in quantities on account of additional scope in new tender shall not be considered for this purpose.

NOTE: Incase portion of work is being withdrawn, contract quantities pertaining to portion of work withdrawn shall be considered as 'Balance scope of work/supply' for calculating Risk & Cost amount.

1.4. LD against delay in executed work/supply in case of Termination of Contract

LD against delay in executed Work /Supply shall be calculated in line with LD clause of the contract for the delay attributable to contractor/ supplier. For this purpose, contract value shall be taken as Executed Value of work/supply for the purpose of limiting maximum LD value.

Method for calculation of “LD against delay in executed Work/ supply” is given below:

- i) Let the time period from scheduled date of start of work till termination of contract excluding the period of Hold (if any) not attributable to contractor/ supplier= T1
- ii) Let the value of executed work/ supply till the time of termination of contract= X
- iii) Let the Total Executable Value of work/ supply for which inputs/fronts were made available to contractor/ supplier and were planned for execution till termination of contract = Y
- iv) Delay in executed work/ supply attributable to contractor/supplier i.e. $T2 = (1 - \frac{X}{Y}) \times T1$
- v) LD shall be calculated in line with LD clause of the Contract for the delay attributable to contractor/ supplier taking “X” as Contract Value and “T2” as delay attributable to contractor/ supplier.

Note: In case portion of service/ supply is withdrawn, no LD shall be applicable for portion of service/ supply withdrawn.

1.5. Recovery from Supplier

Recoveries from contractor/ supplier on whom risk & cost has been invoked shall be as per Clause No. 23 of GTC.

Prices are on PVC basis. The formula for calculating the price adjustment as per IEEMA to be applied to the Ex-Works price component of ACSR Moose/Zebra/ Bersimis & AAC Bull Conductor shall be as follows:

I. ACSR Conductors

$$P_1 = P_0 + WA(AL_1 - AL_0) + WF(FE_1 - FE_0)$$

Wherein,

- P_0 = Base Ex-works price quoted (Rs./km)
 P_1 = Price payable as adjusted in accordance with the above formula (Rs./km)
 WA = Weight of Aluminium in ACSR/AAC conductor (MT/km)
 WF = Weight of Steel Content in ACSR Conductor (MT/km)
 AL_0 = Base Price of Daily LME Cash SELLER settlement price of Aluminium (Rs./MT) as published by IEEMA
 AL_1 = Price of Daily LME Cash SELLER settlement price of Aluminium (Rs./MT) as published by IEEMA
 FE_0 = Base Price of High Tensile Galvanized Steel Wire in (Rs./MT) as published by IEEMA
 FE_1 = Price of High Tensile Galvanized Steel Wire in (Rs./MT) as published by IEEMA

II. AAC/AAAC Conductors

$$P_1 = P_0 + WA (AL_1 - AL_0)$$

Wherein,

- P_0 = Base Ex-works price quoted/ confirmed (Rs./km)
 P_1 = Price payable as adjusted in accordance with the above formula (Rs./km)
 WA = Weight of Aluminium in ACSR/AAC conductor (MT/km)
 AL_0 = Base Price of Daily LME Cash SELLER settlement price of Aluminium (Rs./MT) as published by IEEMA
 AL_1 = Price of Daily LMR Cash SELLER settlement price of Aluminium (Rs./MT) as published by IEEMA

Subscript "0" refers IEEMA indices as on 30 days prior to the date of scheduled opening of Techno-commercial bids

Subscript "1" refers IEEMA indices as applicable as on 30 days prior to the date of shipment.

NOTE:

2.1.1 The price adjustment of Ex-Works price component of ACSR Moose/Zebra/Bersimis & AAC Bull Conductor shall not be subject to any ceiling.

2.1.2 If price adjustment amount works out to be positive, the same will be payable to supplier and if it works out to be negative, the same will be recovered from supplier.

2.1.3 The supplier should ensure submission of price adjustment invoice after dispatch of material (positively within one month), whether such adjustment is positive or negative.

AN GUARANTEE FOR PERFORMANCE SECURITY

Annexure-XIV

Bank Guarantee No:

Date:

To

NAME

& ADDRESSES OF THE BENEFICIARY

Dear Sirs,

In consideration of the Bharat Heavy Electricals Limited 1 (hereinafter referred to as the 'Employer' which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns) incorporated under the Companies Act, 1956 and having its registered office at BHEL House Siri Fort New Delhi-110049 through its Unit at BHEL, TBG, Noida having awarded to (Name of the Vendor / Contractor / Supplier) having its registered office at 2 hereinafter referred to as the 'Contractor/Supplier', which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns), a contract Ref No PO No. 3 valued at Rs 4 (Rupees -----)/FC (in words ..) for 5 (hereinafter called the 'Contract') and the Contractor having agreed to provide a Contract Performance Guarantee, equivalent to % (. Percent) of the said value of the Contract to the Employer for the faithful performance of the Contract,

we, , (hereinafter referred to as the Bank), having registered/Head office at . and inter alia a branch at being the Guarantor under this Guarantee, hereby, irrevocably and unconditionally undertake to forthwith and immediately pay to the Employer a maximum amount Rs ----- (Rupees -----) without any demur, immediately on a demand from the Employer, .

Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. _____.

We undertake to pay to the Employer any money so demanded notwithstanding any dispute or disputes raised by the Contractor/ Supplier in any suit or proceeding pending before any Court or Tribunal relating thereto our liability under this present being absolute and unequivocal.

The payment so made by us under this Guarantee shall be a valid discharge of our liability for payment thereunder and the contractors/supplier shall have no claim against us for making such payment.

We the _____ bank further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Contract and that it shall continue to be enforceable till all the dues of the Employer under or by virtue of the said Contract have been fully paid and its claims satisfied or discharged.

We _____ BANK further agree with the Employer that the Employer shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Contract or to extend time of performance by the said Contractor/Supplier from time to time or to postpone for any time or from time to time any of the powers exercisable by the Employer against the said Contractor/Supplier and to forbear or enforce any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Contractor/Supplier or for any forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the said Contractor/Supplier or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.

The Bank also agrees that the Employer at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Contractor and notwithstanding any security or other guarantee that the Employer may have in relation to the Contractor's liabilities.

This Guarantee shall remain in force upto and including _____⁶ and shall be extended from time to time for such period as may be desired by Employer.

This Guarantee shall not be determined or affected by liquidation or winding up, dissolution or change of constitution or insolvency of the Contractor/Supplier but shall in all respects and for all purposes be binding and operative until payment of all money payable to the Employer in terms thereof.

Unless a demand or claim under this guarantee is made on us in writing on or before the _____⁷ we shall be discharged from all liabilities under this guarantee thereafter.

We _____ BANK lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Employer in writing.

Notwithstanding anything to the contrary contained hereinabove:

- a) The liability of the Bank under this Guarantee shall not exceed _____⁸
- b) This Guarantee shall be valid up to _____⁹
- c) Unless the Bank is served a written claim or demand on or before _____¹⁰ all rights under this guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities under this guarantee irrespective of whether or not the original bank guarantee is returned to the Bank.

We, _____ Bank, have power to issue this Guarantee under law and the undersigned as a duly authorized person has full powers to sign this Guarantee on behalf of the Bank.

For and on behalf of
(Name of the Bank)

Dated _____ .

Place of Issue _____ .

Instruction for BG

¹ NAME AND ADDRESS OF EMPLOYER I.e Bharat Heavy Electricals Limited

² NAME AND ADDRESS OF THE VENDOR /CONTRACTOR / SUPPLIER.

³ DETAILS ABOUT THE NOTICE OF AWARD/CONTRACT REFERENCE

⁴ PROJECT/SUPPLY DETAILS

⁵ BG AMOUNT IN FIGURES AND WORDS

⁶ VALIDITY DATE

⁷ DATE OF EXPIRY OF CLAIM PERIOD

⁸ BG AMOUNT IN FIGURES AND WORDS.

⁹ VALIDITY DATE

¹⁰ DATE OF EXPIRY OF CLAIM PERIOD

Note:

- . Units are advised that expiry of claim period may be **upt / months after validity date.**
- . **In Case of Demand Guarantees submitted by Foreign Vendors-**
 - a. **From National/ Public Sector / Private Sector/ Foreign Demand Guarantees issued by branches in India** can be accepted subject to the condition that the Bank Guarantee should be enforceable in the town/city or at nearest branch where the Unit is located i.e. Demand can be presented at the Branch located in the town/city or at nearest branch where the Unit is located.
 - b. **From Foreign Demand Guarantees wherein Foreign Vendors intend to provide Demand Guarantee from local branch of the Vendor country's Bank**
 - b. In such cases, in the Tender Enquiry/ Contract itself, it may be clearly specified that Bank Guarantee issued by **any of the Consortium Banks only** will be accepted by BHEL. As such, Foreign Vendor needs to make necessary arrangements for issuance of Counter- Guarantee by Foreign Bank in favour of the Indian Bank (BHEL's Consortium Bank). It is advisable that all charges for issuance of Bank Guarantee/ counter- Guarantee should be borne by the Foreign Vendor. The tender stipulation should clearly specify these requirements.
 - b. **In case Foreign Vendors intend to provide Demand Guarantee from Overseas Branch of our Consortium Bank** (e.g. if a BG is to be issued by SBI Frankfurt), the same is acceptable. However, the procedure at **sl.no. b.** will required to be followed.
 - b. The BG issued may preferably be subject to Uniform Rules for Demand Guarantees (URDG) 758 (as amended from time to time). In case, of Foreign Vendors, the BG Format provided to them should clearly specify the same.
 - b. The BG should clearly specify that the demand or other document can be presented in electronic form.

Ref. BHEL/TBG/GTC/2016

Annexure for List of Banks (32 Nos.)

Sr. No.	Name of Bank
1	Allahabad Bank
2	Andhra Bank
3	Bank of Baroda
4	Canara Bank
5	Corporation Bank
6	Central Bank
7	Indian Bank
8	Indian Overseas Bank
9	Oriental Bank of Commerce
10	Punjab National Bank
11	Punjab & Sindh Bank
12	State Bank of India
13	State Bank of Hyderabad
14	Syndicate Bank
15	State Bank of Travancore
16	UCO Bank
17	Union Bank of India
18	United Bank of India
19	Vijaya Bank
20	IDBI
21	CITI Bank N. A.
22	Deutsche Bank AG
23	The Hongkong and Shanghai Banking Corporation Limited
24	Standard Chartered Bank
25	J P Morgan
26	Axis Bank
27	The Federal Bank Limited
28	HDFC
29	Kotak Mahindra Bank
30	ICICI
31	Indusind Bank
32	Yes Bank

Guidelines for Reverse Auction – 2021

Doc. No. AA:SSP:RA:05
Dated: 08.03.2021

1.0 Scope

This document describes the guidelines to be followed by BHEL for conducting Reverse Auction (RA) for procurement of material/ works/ services. The RA shall follow the philosophy of English Reverse (No ties).

English Reverse (No ties) is a type of auction where the starting price and bid decrement are announced before start of online reverse auction. The interested bidders can thereupon start bidding in an iterative process wherein the lowest bidder at any given moment can be displaced by an even lower bid of a competing bidder, within a given time frame. The bidding is with reference to the current lowest bid in the reverse auction. All bidders will see the current lowest quoted price and their rank. The term 'No ties' is used since more than one bidder cannot give an identical price, at a given instant, during the reverse auction. In other words, there shall never be a tie in the bids.

3.0 Upfront declaration in NIT

Decision to go for RA would be taken before floating of the tender. In case it is decided to go for RA, same shall be declared upfront in NIT by inserting the following **clause**:

"BHEL shall be resorting to Reverse Auction (RA) (Guidelines as available on www.bhel.com) for this tender. RA shall be conducted among the techno-commercially qualified bidders.

Price bids of all techno-commercially qualified bidders shall be opened and same shall be considered for RA. In case any bidder(s) do(es) not participate in online Reverse Auction, their sealed envelope price bid along with applicable loading, if any, shall be considered for ranking."

6.0 Business rules for RA

Model Annexure-I is attached.

7.0 Role of Service Provider

- Acknowledge the receipt of mandate from BHEL.
- Contact the bidders, provide business rules and train them, as required.
- Get the process compliance form signed by all the participating bidders before RA event.

Guidelines for Reverse Auction – 2021

Doc. No. AA:SSP:RA:05
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- Conduct the event as per the contract and business rules.
- Submit the Login Reports, Results, History sheet and authorized final bid from the bidders.
- To obtain price breakup from successful bidder and submit the same to BHEL.

10.0 Reverse Auction Process

10.1 Reverse Auction will be conducted if two or more bidders are techno-commercially qualified. In case of two or three qualified bidders, there shall be no elimination of H1 bidder (whose quote is highest in sealed envelope price bid). In case of four qualified bidders, the H1 bidder shall be eliminated whereas in case of five qualified bidders, H1 & H2 bidders shall be eliminated. However, in case of six or more qualified bidders are available, RA would be conducted amongst first 50% of the bidders arranged in the order of prices from lowest to highest. Number of bidders eligible for participating in RA would be rounded off to next higher integer value if number of qualified bidders is odd (e.g. if 7 bids are qualified, then RA will be conducted amongst lowest four bidders). However, there will be no elimination of qualified bidders who are MSE or qualifying under PPP-MII, Order 2017, irrespective of the number of bidders qualifying techno-commercially.

In case of multiple H1 bidders, all H1 bidders (excluding MSEs and bidders qualifying under PPP-MII, Order 2017) shall be removed provided minimum two bidders remain in fray, else no H1 removal.

10.2 During RA, all bidders will see their rank and current L1 price on the screen. Once the RA is done, the ranking status would be based on the last quoted price of the bidder(s) irrespective of the quote received in RA or sealed envelope price bid.

10.3 No bidder shall be allowed to lower its bid below the current L1 by more than 5 decrements at one go.

11.0 Processing of case after RA

11.2 In case of splitting requirement, bidders who were removed from participation in RA may also be considered for counter offer if the pre-stated (NIT) numbers of suppliers do not accept the counter offer.

Guidelines for Reverse Auction – 2021

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13.0 Others

- 13.2 In case of enquiry through e-Procurement, the sealed electronic price bid (e-bid) is to be treated as sealed envelope price bid.
- 13.3 BHEL will inform bidders the details of service provider who will provide business rules, all necessary training and assistance before commencement of online bidding.
- 13.4 Bidders will be advised to read the 'Business Rules' indicating details of RA event carefully, before reverse auction event.

---XXX---

ABRIDGED VERSION

Guidelines for Reverse Auction – 2021

Doc. No. AA:SSP:RA:05

Dated: 08.03.2021

Business Rules for Reverse Auction

Annexure – I

This has reference to tender no **{tender number....date...}**. BHEL shall finalise the Rates for the supply of *{item name}* through Reverse Auction mode. BHEL has made arrangement with M/s. *{Service provider}*, who shall be BHEL's authorized service provider for the same. Bidders should go through the instructions given below and submit acceptance of the same.

The technical & commercial terms are as per (a) BHEL Tender Enq. No. {...} dated {...}, (b) Bidders' technical & commercial bid (in case of two part bid) and (c) subsequent correspondences between BHEL and the bidders, if any.

1. Procedure of Reverse Auctioning

- i. Price bids of all techno-commercially qualified bidders shall be opened.
- ii. **Reverse Auction:** The 'bid decrement' will be decided by BHEL.
- iv. Bidders by offering a minimum bid decrement or the multiples thereof can displace a standing lowest bid and become "L1" and this continues as an iterative process. However, no bidder shall be allowed to lower its bid below the current L1 by more than 5 decrements at one go.
- v. After the completion of the reverse auction, the Closing Price shall be available for further processing.
- vi. Wherever the evaluation is done on total cost basis, after Reverse Auction, prices of individual line items shall be reduced on pro-rata basis.

2. Schedule for reverse auction: The Reverse Auction is tentatively scheduled on *{date}*: *{start time}*: *{Close Time}*: *}*.

3. Auction extension time: If a bidder places a bid in the last {...} minutes of closing of the Reverse Auction and if that bid gets accepted, then the auction's duration shall get extended automatically for another {...} minutes, for the entire auction (i.e. for all the items in the auction), from the time that bid comes in. Please note that the auto-extension will take place only if a bid comes in those last {...} minutes and if that bid gets accepted as the lowest bid. If the bid does not get accepted as the lowest bid, the auto-extension will not take place even if that bid might have come in the last {...}

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Business Rules for Reverse Auction

Annexure – I

minutes. In case, there is no bid in the last {...} minutes of closing of Reverse Auction, the auction shall get closed automatically without any extension. However, bidders are advised not to wait till the last minute or last few seconds to enter their bid during the auto-extension period to avoid complications related with internet connectivity, network problems, system crash down, power failure, etc.

The above process will continue till completion of Reverse Auction.

Complaints/ Grievances, if any, regarding denial of service or any related issue should be given in writing thru e-mail/ fax to M/s. {Service provider} with a copy to BHEL within 15 minutes prior to initial closing time of Reverse Auction.

4. **Bid price:** The Bidder has to quote the {...} Price inclusive of Packing & Forwarding charges, all the routine & type tests as per tender scope, taxes, duties, freight and insurance as specified in tender document, including loading (if indicated by BHEL due to deviations in technical/ commercial terms) for the Items specified. Details are as shown in Excel Sheet for calculation of total cost to BHEL (To be specified by Unit as per NIT conditions).
5. **Bidding currency and unit of measurement:** Bidding will be conducted in *Indian Rupees per Unit* of the material as per the specifications {...}

In case of foreign currency bids, exchange rate (TT selling rate of State Bank of India) as on scheduled date of tender opening (Part-I bid) shall be considered for conversion in Indian Rupees. If the relevant day happens to be a Bank holiday, then the forex rate as on the previous bank (SBI) working day shall be taken.
6. **Validity of bids:** Price shall be valid for {... days} from the date of reverse auction. These shall not be subjected to any change whatsoever.
7. **Lowest bid of a bidder:** In case the bidder submits more than one bid, the lowest bid at the end of Reverse Auction will be considered as the bidder's final offer to execute the work.
8. Unique user IDs shall be used by bidders during bidding process. All bids

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Business Rules for Reverse Auction

Annexure – I

made from the Login ID given to the bidders will be deemed to have been made by the bidders/ bidders' company.

9. **Post auction procedure:** BHEL will proceed with the Lowest Bid in the Reverse Auction for further processing.
11. Reverse auction shall be conducted by BHEL (through M/s {Service Provider}), on pre-specified date, while the bidders shall be quoting from their own offices/ place of their choice. Internet connectivity shall have to be ensured by bidders themselves.

During the RA process if a bidder is not able to bid and requests for extension of time by FAX/ email/ phone then time extension of additional 15 minutes will be given by the service provider provided such requests come before 5 minutes of auction closing time. However, only one such request per bidder can be entertained.

In order to ward-off contingent situation of connectivity failure bidders are requested to make all the necessary arrangements/ alternatives whatever required so that they are able to circumvent such situation and still be able to participate in the reverse auction successfully. Failure of power or loss of connectivity at the premises of bidders during the Reverse auction cannot be the cause for not participating in the reverse auction. On account of this, the time for the auction cannot be extended and neither BHEL nor M/s. {Service provider} is responsible for such eventualities.

12. Proxy bids: Proxy bidding feature is a pro-bidder feature to safe guard the bidder's interest of any internet failure or to avoid last minute rush. The proxy feature allows bidders to place an automated bid in the system directly in an auction and bid without having to enter a new amount each time a competing bidder submits a new offer. The bid amount that a bidder enters is the minimum that the bidder is willing to offer. Here the software bids on behalf of the bidder. This obviates the need for the bidder participating in the bidding process until the proxy bid amount is decrementally reached by other bidders. When proxy bid amount is reached, the bidder (who has submitted the proxy bid) has an option to start participating in the bidding process.

The proxy amount is the minimum amount that the bidder is willing to offer.

Guidelines for Reverse Auction – 2021

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Business Rules for Reverse Auction

Annexure – I

During the course of bidding, the bidder cannot delete or change the amount of a proxy bid.

Bids are submitted in decrements (decreasing bid amounts). The application automates proxy bidding by processing proxy bids automatically, according to the decrement that the auction originator originally established when creating the auction, submitting offers to the next bid decrement each time a competing bidder bids, regardless of the fact whether the competing bids are submitted as proxy or standard bids. However, it may please be noted that if a manual bid and proxy bid are submitted at the same instant manual bid will be recognized as the L1 at that instant.

In case of more than one proxy bid, the system shall bid till it crosses the threshold value of 'each lowest proxy bid' and thereafter allow the competition to decide the final L1 price.

Proxy bids are fed into the system directly by the respective bidders. As such this information is privy only to the respective bidder(s).

13. Bidders are advised to get fully trained and clear all their doubts such as refreshing of Screen, quantity being auctioned, tender value being auctioned etc from M/s {Service provider}.
14. M/s. {Service provider}, shall arrange to demonstrate/ train the bidder or bidder's nominated person(s), without any cost to bidders. M/s. {Service provider}, shall also explain the bidders, all the business rules related to the Reverse Auction. Bidders are required to submit their acceptance to the terms/ conditions/ modalities before participating in the Reverse Auction in the process compliance form as enclosed. Without this, the bidder will not be eligible to participate in the event.
15. Successful bidder shall be required to submit the final prices (L1) in prescribed format (Annexure – VI) for price breakup, quoted during the Reverse Auction, duly signed and stamped as token of acceptance without any new condition (other than those already agreed to before start of auction), after the completion of auction to M/s. {Service provider} besides BHEL within two working days of Auction without fail.
16. Any variation between the final bid value and that in the confirmatory

Guidelines for Reverse Auction – 2021

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Business Rules for Reverse Auction

Annexure – I

signed price breakup document will be considered as tampering the tender process and will invite action by BHEL as per extant guidelines for suspension of business dealings (as available on www.bhel.com).

17. Bidders' bid will be taken as an offer to execute the work/ supplies the item as per enquiry no. {...} dt. {...}. Bids once made by the bidder, cannot be cancelled/ withdrawn and bidder shall be bound to execute the work as mentioned above at bidder's final bid price. Should bidder back out and not execute the contract as per the rates quoted, BHEL shall take action as per extant guidelines for suspension of business dealings (as available on www.bhel.com).
18. Bidders shall be able to view the following on their screen along with the necessary fields during Reverse Auction:
 - a. Leading (Running Lowest) Bid in the Auction (only total price of package)
 - b. Bid Placed by the bidder
 - c. Start Price
 - d. Decrement value
 - e. Rank of their own bid during bidding as well as at the close of auction.
19. BHEL's decision on award of contract shall be final and binding on all the Bidders.
20. BHEL reserves the right to extend, reschedule or cancel the Reverse Auction process at any time, before ordering, without assigning any reason, with intimation to bidders.
21. BHEL shall not have any liability to bidders for any interruption or delay in access to the site irrespective of the cause. In such cases, the decision of BHEL shall be binding on the bidders.
22. Other terms and conditions shall be as per bidder's techno-commercial offers and other correspondences, if any, till date.
23. If there is any clash between this business document and the FAQ available, if any, in the website of M/s. {Service provider}, the terms & conditions given in this business document will supersede the information contained in the FAQs. Any changes made by BHEL/ service provider (due to unforeseen

Guidelines for Reverse Auction – 2021

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Business Rules for Reverse Auction

Annexure – I

contingencies) after the first posting shall be deemed to have been accepted if the bidder continues to access the portal after that time.

- 24.** Bidder shall not divulge either his Bids or any other exclusive details of BHEL to any other party. If the Bidder or any of his representatives are found to be involved in Price manipulation/ cartel formation of any kind, directly or indirectly by communicating with other bidders, action as per extant BHEL guidelines for suspension of business dealings (as available on www.bhel.com), shall be initiated by BHEL.

ABRIDGED VERSION

Annexure-XVII

CONTACT DETAILS OF BIDDER

Works Address-	
Communication Address-	
Details of contact person for clarification regarding bid:	
Contact Person Name:	
Designation:	
Email Id.:	
Mobile No.:	
Landline No.:	

Signature & Seal of

Supplier

Date:

SCHEDULE OF COMMERCIAL DEVIATION

ENQUIRY NO

This Format is to be submitted in original duly signed by bidder.

The following are the deviations/variations/exceptions from the Terms and Conditions :-

SL. NO.	CLAUSE NO. OF TERMS AND CONDITIONS	STATEMENT OF DEVIATION
	NIL	NIL

In case, this schedule is not submitted, it will be presumed that the equipment /material to be supplied under this contract is deemed to be in compliance with the Terms and Conditions.

If there is NIL deviation,even then the format to be filled as NIL DEVIATION.

Note : Continuation Sheets of like size and format may be used as per the Bidder's Requirement and shall be annexed to this schedule.

Place : ō ō ō ō ō ō ō
Date : ō ō ō ō ō ō ō .

Signature of the authorised representative of

Bidder's name :ō ō ō ō ō ō ō ō ō ō ō ō ō ō
Designation:ō ō ō ō ō ō ō ō ō ō ō ō ō ō ..
Company Seal:ō ō ō ō ō ō ō ō ō ō ō ō ō ō

SCHEDULE OF TECHNICAL DEVIATION

ENQUIRY NO.

This Format is to be submitted in original duly signed by bidder.

The following are the deviations/variations/exceptions from the Terms and Conditions :-

SL. NO.	CLAUSE NO. OF TERMS AND CONDITIONS	STATEMENT OF DEVIATION
	NIL	NIL

In case, this schedule is not submitted, it will be presumed that the equipment /material to be supplied under this contract is deemed to be in compliance with the Terms and Conditions.

If there is NIL deviation,even then the format to be filled as NIL DEVIATION.

Note : Continuation Sheets of like size and format may be used as per the Bidder's Requirement and shall be annexed to this schedule.

Place : o o o o o o
Date : o o o o o o .

Signature of the authorised representative of

Bidder's name :o o o o o o o o o o o o
Designation:o o o o o o o o o o o o ..
Company Seal:o o o o o o o o o o o o o o

Annexure XX - UNPRICED BID

Project BHEL TBG/RATE CONTRACT

Item OVER HEAD CONDUCTORS

Item number	Item Description	Item quantity	Unit of measurement	Unit Price (inclusive of Tax)	GST % applicable
1	OVER HEAD CONDUCTORS ACSR MOOSE	30	KM	Mention as "Quoted"	Mention GST %
2	OVER HEAD CONDUCTORS ACSR BERSIMIS	25	KM	Mention as "Quoted"	Mention GST %
3	OVER HEAD CONDUCTORS ACSR ZEBRA	5	KM	Mention as "Quoted"	Mention GST %
4	OVER HEAD CONDUCTORS AAC BULL	15	KM	Mention as "Quoted"	Mention GST %
5	DIFFERENTIAL PRICE FOR SUPPLY OF CONDUCTOR ON NON RETURNABLE STEEL DRUM FOR ACSR CONDUCTORS	1	NO	Mention as "Quoted"	Mention GST %
6	DIFFERENTIAL PRICE FOR SUPPLY OF CONDUCTOR ON NON RETURNABLE STEEL DRUM FOR AAC CONDUCTORS	1	NO	Mention as "Quoted"	Mention GST %

Signature & Seal of supplier



BHARAT HEAVY ELECTRICALS LIMITED
TRANSMISSION BUSINESS GROUP
MATERIAL RECEIPT CERTIFICATE

- a) Site:
b) LR No. with date:
c) Vehicle no.:
d) Date of receipt of material at site:
e) Material details (as mentioned below):

S.no.	Item Description	Type of Packages	Unit (MT/KM/NO.)	Qty as per packing list	Qty Received	Remarks

Other Remarks:

Signature with date: _____

Name & Designation: _____
(With Seal)

INSPECTION REQUEST

1. Name & Address of Supplier :
2. Project :
3. Purchase Order No., Revision No. & Date :
4. Details of equipment / Material to be Inspected

Sl. No.	Material offered for Inspection	P.O. Item No.	Total Quantity Ordered	Quantity offered for Inspection	Quantity Already Cleared	P.O. value of offered qty.

5. For structure, whether BOM & Proto Corrected Drawings approved and available at place of inspection : Yes / No
6. Whether GTP/Drgs approved in Category – 1 available at place of inspection : Yes / No
7. Whether Quality Plan approved in Category – 1 available at place of inspection : Yes / No.
8. Whether all type tests approved by Engineering :Yes / No
9. (a) Place of Inspection & Address :
9. (b) Name & contact No. of Supplier rep. for inspection :
10. Sub – supplier contact person's name & contact No. :
11. Weekly off day : _____ 12. Working Hours :
13. Date on which inspection requested (Inspection call to be raised at least 7 days prior to inspection) :
14. No of road permits required :

It is certified that the above materials shall be completed in all respects and shall have been inspected by us before the date indicated above for inspection. You are requested to please depute your representative for inspection

Signature
Name :
Contact No. :
Date :

Distribution :

1. Material Management , BHEL, New Delhi

Note :

1. Unsigned inspection request & Inspection requests not given in this format are not accepted.
2. Drawings, Quality Plan should be approved in category – I by BHEL Transmission Business Engineering Management before the inspection date. In case inspection request is given without Category – I approved documents, supplier should be obtain from BHEL Transmission Business Engineering Management in writing to this effect and attach to inspection request.

No. P-45021/2/2017-PP (BE-II)
Government of India
Ministry of Commerce and Industry
Department for Promotion of Industry and Internal Trade
(Public Procurement Section)

Udyog Bhawan, New Delhi
Dated: 16th September, 2020

To

All Central Ministries/Departments/CPSUs/All concerned

ORDER

Subject: Public Procurement (Preference to Make in India), Order 2017– Revision; regarding.

Department for Promotion of Industry and Internal Trade, in partial modification [Paras 2, 3, 5, 10 & 13] of Order No.P-45021/2/2017-B.E.-II dated 15.6.2017 as amended by Order No.P-45021/2/2017-B.E.-II dated 28.05.2018, Order No.P-45021/2/2017-B.E.-II dated 29.05.2019 and Order No.P-45021/2/2017-B.E.-II dated 04.06.2020, hereby issues the revised 'Public Procurement (Preference to Make in India), Order 2017' dated 16.09.2020 effective with immediate effect.

Whereas it is the policy of the Government of India to encourage 'Make in India' and promote manufacturing and production of goods and services in India with a view to enhancing income and employment, and

Whereas procurement by the Government is substantial in amount and can contribute towards this policy objective, and

Whereas local content can be increased through partnerships, cooperation with local companies, establishing production units in India or Joint Ventures (JV) with Indian suppliers, increasing the participation of local employees in services and training them,

Now therefore the following Order is issued:

1. This Order is issued pursuant to Rule 153 (iii) of the General Financial Rules 2017.
2. **Definitions:** For the purposes of this Order:

'Local content' means the amount of value added in India which shall, unless otherwise prescribed by the Nodal Ministry, be the total value of the item procured (excluding net domestic indirect taxes) minus the value of imported content in the item (including all customs duties) as a proportion of the total value, in percent.

'Class-I local supplier' means a supplier or service provider, whose goods, services or works offered for procurement, meets the minimum local content as prescribed for 'Class-I local supplier' under this Order.

.....Contd. p/2

'Class-II local supplier' means a supplier or service provider, whose goods, services or works offered for procurement, meets the minimum local content as prescribed for 'Class-II local supplier' but less than that prescribed for 'Class-I local supplier' under this Order.

'Non - Local supplier' means a supplier or service provider, whose goods, services or works offered for procurement, has local content less than that prescribed for 'Class-II local supplier' under this Order.

'L1' means the lowest tender or lowest bid or the lowest quotation received in a tender, bidding process or other procurement solicitation as adjudged in the evaluation process as per the tender or other procurement solicitation.

'Margin of purchase preference' means the maximum extent to which the price quoted by a "Class-I local supplier" may be above the L1 for the purpose of purchase preference.

'Nodal Ministry' means the Ministry or Department identified pursuant to this order in respect of a particular item of goods or services or works.

'Procuring entity' means a Ministry or department or attached or subordinate office of, or autonomous body controlled by, the Government of India and includes Government companies as defined in the Companies Act.

'Works' means all works as per Rule 130 of GFR- 2017, and will also include 'turnkey works'.

3. Eligibility of 'Class-I local supplier'/ 'Class-II local supplier'/ 'Non-local suppliers' for different types of procurement

(a) In procurement of all goods, services or works in respect of which the Nodal Ministry / Department has communicated that there is sufficient local capacity and local competition, only 'Class-I local supplier', as defined under the Order, shall be eligible to bid irrespective of purchase value.

(b) Only 'Class-I local supplier' and 'Class-II local supplier', as defined under the Order, shall be eligible to bid in procurements undertaken by procuring entities, except when Global tender enquiry has been issued. In global tender enquiries, 'Non-local suppliers' shall also be eligible to bid along with 'Class-I local suppliers' and 'Class-II local suppliers'. In procurement of all goods, services or works, not covered by sub-para 3(a) above, and with estimated value of purchases less than Rs. 200 Crore, in accordance with Rule 161(iv) of GFR, 2017, Global tender enquiry shall not be issued except with the approval of competent authority as designated by Department of Expenditure.

(c) For the purpose of this Order, works includes Engineering, Procurement and Construction (EPC) contracts and services include System Integrator (SI) contracts.

3A. Purchase Preference

(a) Subject to the provisions of this Order and to any specific instructions issued by the Nodal Ministry or in pursuance of this Order, purchase preference shall be given to 'Class-I local supplier' in procurements undertaken by procuring entities in the manner specified here under.

(b) In the procurements of goods or works, which are covered by para 3(b) above and which are divisible in nature, the 'Class-I local supplier' shall get purchase preference over 'Class-II local supplier' as well as 'Non-local supplier', as per following procedure:

- i. Among all qualified bids, the lowest bid will be termed as L1. If L1 is 'Class-I local supplier', the contract for full quantity will be awarded to L1.
- ii. If L1 bid is not a 'Class-I local supplier', 50% of the order quantity shall be awarded to L1. Thereafter, the lowest bidder among the 'Class-I local supplier' will be invited to match the L1 price for the remaining 50% quantity subject to the Class-I local supplier's quoted price falling within the margin of purchase preference, and contract for that quantity shall be awarded to such 'Class-I local supplier' subject to matching the L1 price. In case such lowest eligible 'Class-I local supplier' fails to match the L1 price or accepts less than the offered quantity, the next higher 'Class-I local supplier' within the margin of purchase preference shall be invited to match the L1 price for remaining quantity and so on, and contract shall be awarded accordingly. In case some quantity is still left uncovered on Class-I local suppliers, then such balance quantity may also be ordered on the L1 bidder.

(c) In the procurements of goods or works, which are covered by para 3(b) above and which are not divisible in nature, and in procurement of services where the bid is evaluated on price alone, the 'Class-I local supplier' shall get purchase preference over 'Class-II local supplier' as well as 'Non-local supplier', as per following procedure:

- i. Among all qualified bids, the lowest bid will be termed as L1. If L1 is 'Class-I local supplier', the contract will be awarded to L1.
- ii. If L1 is not 'Class-I local supplier', the lowest bidder among the 'Class-I local supplier', will be invited to match the L1 price subject to Class-I local supplier's quoted price falling within the margin of purchase preference, and the contract shall be awarded to such 'Class-I local supplier' subject to matching the L1 price.
- iii. In case such lowest eligible 'Class-I local supplier' fails to match the L1 price, the 'Class-I local supplier' with the next higher bid within the margin of purchase preference shall be invited to match the L1 price and so on and contract shall be awarded accordingly. In case none of the 'Class-I local supplier' within the margin of purchase preference matches the L1 price, the contract may be awarded to the L1 bidder.

(d) "Class-II local supplier" will not get purchase preference in any procurement, undertaken by procuring entities.

3B. Applicability in tenders where contract is to be awarded to multiple bidders -

In tenders where contract is awarded to multiple bidders subject to matching of L1 rates or otherwise, the 'Class-I local supplier' shall get purchase preference over 'Class-II local supplier' as well as 'Non-local supplier', as per following procedure:

a) In case there is sufficient local capacity and competition for the item to be procured, as notified by the nodal Ministry, only Class I local suppliers shall be eligible to bid. As such, the multiple suppliers, who would be awarded the contract, should be all and only 'Class I Local suppliers'.

b) In other cases, 'Class II local suppliers' and 'Non local suppliers' may also participate in the bidding process along with 'Class I Local suppliers' as per provisions of this Order.

c) If 'Class I Local suppliers' qualify for award of contract for at least 50% of the tendered quantity in any tender, the contract may be awarded to all the qualified bidders as per award criteria stipulated in the bid documents. However, in case 'Class I Local suppliers' do not qualify for award of contract for at least 50% of the tendered quantity, purchase preference should be given to the 'Class I local supplier' over 'Class II local suppliers' / 'Non local suppliers' provided that their quoted rate falls within 20% margin of purchase preference of the highest quoted bidder considered for award of contract so as to ensure that the 'Class I Local suppliers' taken in totality are considered for award of contract for at least 50% of the tendered quantity.

d) First purchase preference has to be given to the lowest quoting 'Class-I local supplier', whose quoted rates fall within 20% margin of purchase preference, subject to its meeting the prescribed criteria for award of contract as also the constraint of maximum quantity that can be sourced from any single supplier. If the lowest quoting 'Class-I local supplier', does not qualify for purchase preference because of aforesaid constraints or does not accept the offered quantity, an opportunity may be given to next higher 'Class-I local supplier', falling within 20% margin of purchase preference, and so on.

e) To avoid any ambiguity during bid evaluation process, the procuring entities may stipulate its own tender specific criteria for award of contract amongst different bidders including the procedure for purchase preference to 'Class-I local supplier' within the broad policy guidelines stipulated in sub-paras above.

4. **Exemption of small purchases:** Notwithstanding anything contained in paragraph 3, procurements where the estimated value to be procured is less than Rs. 5 lakhs shall be exempt from this Order. However, it shall be ensured by procuring entities that procurement is not split for the purpose of avoiding the provisions of this Order.

5. **Minimum local content:** The 'local content' requirement to categorize a supplier as 'Class-I local supplier' is minimum 50%. For 'Class-II local supplier', the 'local content' requirement is minimum 20%. Nodal Ministry/ Department may prescribe only a higher

percentage of minimum local content requirement to categorize a supplier as 'Class-I local supplier'/ 'Class-II local supplier'. For the items, for which Nodal Ministry/ Department has not prescribed higher minimum local content notification under the Order, it shall be 50% and 20% for 'Class-I local supplier'/ 'Class-II local supplier' respectively.

6. **Margin of Purchase Preference:** The margin of purchase preference shall be 20%.
7. **Requirement for specification in advance:** The minimum local content, the margin of purchase preference and the procedure for preference to Make in India shall be specified in the notice inviting tenders or other form of procurement solicitation and shall not be varied during a particular procurement transaction.
8. **Government E-marketplace:** In respect of procurement through the Government E-marketplace (GeM) shall, as far as possible, specifically mark the items which meet the minimum local content while registering the item for display, and shall, wherever feasible, make provision for automated comparison with purchase preference and without purchase preference and for obtaining consent of the local supplier in those cases where purchase preference is to be exercised.
9. **Verification of local content:**
 - a. The 'Class-I local supplier'/ 'Class-II local supplier' at the time of tender, bidding or solicitation shall be required to indicate percentage of local content and provide self-certification that the item offered meets the local content requirement for 'Class-I local supplier'/ 'Class-II local supplier', as the case may be. They shall also give details of the location(s) at which the local value addition is made.
 - b. In cases of procurement for a value in excess of Rs. 10 crores, the 'Class-I local supplier'/ 'Class-II local supplier' shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content.
 - c. Decisions on complaints relating to implementation of this Order shall be taken by the competent authority which is empowered to look into procurement-related complaints relating to the procuring entity.
 - d. Nodal Ministries may constitute committees with internal and external experts for independent verification of self-declarations and auditor's/ accountant's certificates on random basis and in the case of complaints.
 - e. Nodal Ministries and procuring entities may prescribe fees for such complaints.
 - f. False declarations will be in breach of the Code of Integrity under Rule 175(1)(i)(h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law.

- g. A supplier who has been debarred by any procuring entity for violation of this Order shall not be eligible for preference under this Order for procurement by any other procuring entity for the duration of the debarment. The debarment for such other procuring entities shall take effect prospectively from the date on which it comes to the notice of other procurement entities, in the manner prescribed under paragraph 9h below.
- h. The Department of Expenditure shall issue suitable instructions for the effective and smooth operation of this process, so that:
 - i. The fact and duration of debarment for violation of this Order by any procuring entity are promptly brought to the notice of the Member-Convenor of the Standing Committee and the Department of Expenditure through the concerned Ministry /Department or in some other manner;
 - ii. on a periodical basis such cases are consolidated and a centralized list or decentralized lists of such suppliers with the period of debarment is maintained and displayed on website(s);
 - iii. in respect of procuring entities other than the one which has carried out the debarment, the debarment takes effect prospectively from the date of uploading on the website(s) in the such a manner that ongoing procurements are not disrupted.

10. Specifications in Tenders and other procurement solicitations:

- a. Every procuring entity shall ensure that the eligibility conditions in respect of previous experience fixed in any tender or solicitation do not require proof of supply in other countries or proof of exports.
- b. Procuring entities shall endeavour to see that eligibility conditions, including on matters like turnover, production capability and financial strength do not result in unreasonable exclusion of 'Class-I local supplier'/ 'Class-II local supplier' who would otherwise be eligible, beyond what is essential for ensuring quality or creditworthiness of the supplier.
- c. Procuring entities shall, within 2 months of the issue of this Order review all existing eligibility norms and conditions with reference to sub-paragraphs 'a' and 'b' above.

d. Reciprocity Clause

- i. When a Nodal Ministry/Department identifies that Indian suppliers of an item are not allowed to participate and/ or compete in procurement by any foreign government, due to restrictive tender conditions which have direct or indirect effect of barring Indian companies such as registration in the procuring country, execution of projects of specific value in the procuring country etc., it shall provide such details to all its procuring entities including CMDs/CEOs of PSEs/PSUs, State Governments and other procurement agencies under their administrative control and GeM for appropriate reciprocal action.

- ii. Entities of countries which have been identified by the nodal Ministry/Department as not allowing Indian companies to participate in their Government procurement for any item related to that nodal Ministry shall not be allowed to participate in Government procurement in India for all items related to that nodal Ministry/ Department, except for the list of items published by the Ministry/ Department permitting their participation.
 - iii. The stipulation in (ii) above shall be part of all tenders invited by the Central Government procuring entities stated in (i) above. All purchases on GeM shall also necessarily have the above provisions for items identified by nodal Ministry/ Department.
 - iv. State Governments should be encouraged to incorporate similar provisions in their respective tenders.
 - v. The term 'entity' of a country shall have the same meaning as under the FDI Policy of DPIIT as amended from time to time.
- e. Specifying foreign certifications/ unreasonable technical specifications/ brands/ models in the bid document is restrictive and discriminatory practice against local suppliers. If foreign certification is required to be stipulated because of non-availability of Indian Standards and/or for any other reason, the same shall be done only after written approval of Secretary of the Department concerned or any other Authority having been designated such power by the Secretary of the Department concerned.
- f. "All administrative Ministries/Departments whose procurement exceeds Rs. 1000 Crore per annum shall notify/ update their procurement projections every year, including those of the PSEs/PSUs, for the next 5 years on their respective website."

10A. Action for non-compliance of the Provisions of the Order: In case restrictive or discriminatory conditions against domestic suppliers are included in bid documents, an inquiry shall be conducted by the Administrative Department undertaking the procurement (including procurement by any entity under its administrative control) to fix responsibility for the same. Thereafter, appropriate action, administrative or otherwise, shall be taken against erring officials of procurement entities under relevant provisions. Intimation on all such actions shall be sent to the Standing Committee.

11. Assessment of supply base by Nodal Ministries: The Nodal Ministry shall keep in view the domestic manufacturing / supply base and assess the available capacity and the extent of local competition while identifying items and prescribing the higher minimum local content or the manner of its calculation, with a view to avoiding cost increase from the operation of this Order.

12. Increase in minimum local content: The Nodal Ministry may annually review the local content requirements with a view to increasing them, subject to availability of sufficient local competition with adequate quality.

13. **Manufacture under license/ technology collaboration agreements with phased indigenization:** While notifying the minimum local content, Nodal Ministries may make special provisions for exempting suppliers from meeting the stipulated local content if the product is being manufactured in India under a license from a foreign manufacturer who holds intellectual property rights and where there is a technology collaboration agreement / transfer of technology agreement for indigenous manufacture of a product developed abroad with clear phasing of increase in local content.
- 13A. In procurement of all goods, services or works in respect of which there is substantial quantity of public procurement and for which the nodal ministry has not notified that there is sufficient local capacity and local competition, the concerned nodal ministry shall notify an upper threshold value of procurement beyond which foreign companies shall enter into a joint venture with an Indian company to participate in the tender. Procuring entities, while procuring such items beyond the notified threshold value, shall prescribe in their respective tenders that foreign companies may enter into a joint venture with an Indian company to participate in the tender. The procuring Ministries/Departments shall also make special provisions for exempting such joint ventures from meeting the stipulated minimum local content requirement, which shall be increased in a phased manner.
14. **Powers to grant exemption and to reduce minimum local content:** The administrative Department undertaking the procurement (including procurement by any entity under its administrative control), with the approval of their Minister-in-charge, may by written order, for reasons to be recorded in writing,
- a. reduce the minimum local content below the prescribed level; or
 - b. reduce the margin of purchase preference below 20%; or
 - c. exempt any particular item or supplying entities from the operation of this Order or any part of the Order.

A copy of every such order shall be provided to the Standing Committee and concerned Nodal Ministry / Department. The Nodal Ministry / Department concerned will continue to have the power to vary its notification on Minimum Local Content.

15. **Directions to Government companies:** In respect of Government companies and other procuring entities not governed by the General Financial Rules, the administrative Ministry or Department shall issue policy directions requiring compliance with this Order.
16. **Standing Committee:** A standing committee is hereby constituted with the following membership:
- Secretary, Department for Promotion of Industry and Internal Trade—Chairman
 - Secretary, Commerce—Member
 - Secretary, Ministry of Electronics and Information Technology—Member
 - Joint Secretary (Public Procurement), Department of Expenditure—Member
 - Joint Secretary (DPIIT)—Member-Convenor

The Secretary of the Department concerned with a particular item shall be a member in respect of issues relating to such item. The Chairman of the Committee may co-opt technical experts as relevant to any issue or class of issues under its consideration.

17. Functions of the Standing Committee: The Standing Committee shall meet as often as necessary, but not less than once in six months. The Committee

- a. shall oversee the implementation of this order and issues arising therefrom, and make recommendations to Nodal Ministries and procuring entities.
- b. shall annually assess and periodically monitor compliance with this Order
- c. shall identify Nodal Ministries and the allocation of items among them for issue of notifications on minimum local content
- d. may require furnishing of details or returns regarding compliance with this Order and related matters
- e. may, during the annual review or otherwise, assess issues, if any, where it is felt that the manner of implementation of the order results in any restrictive practices, cartelization or increase in public expenditure and suggest remedial measures
- f. may examine cases covered by paragraph 13 above relating to manufacture under license/ technology transfer agreements with a view to satisfying itself that adequate mechanisms exist for enforcement of such agreements and for attaining the underlying objective of progressive indigenization
- g. may consider any other issue relating to this Order which may arise.

18. Removal of difficulties: Ministries /Departments and the Boards of Directors of Government companies may issue such clarifications and instructions as may be necessary for the removal of any difficulties arising in the implementation of this Order.

19. Ministries having existing policies: Where any Ministry or Department has its own policy for preference to local content approved by the Cabinet after 1st January 2015, such policies will prevail over the provisions of this Order. All other existing orders on preference to local content shall be reviewed by the Nodal Ministries and revised as needed to conform to this Order, within two months of the issue of this Order.

20. Transitional provision: This Order shall not apply to any tender or procurement for which notice inviting tender or other form of procurement solicitation has been issued before the issue of this Order.



(Rajesh Gupta)
Director

Tel: 23063211

rajesh.gupta66@gov.in

No. A-1/2021-FSC-Part(5)
Government of India
Ministry of Power

Shram Shakti Bhawan, New Delhi
Dated: 16th November, 2021

ORDER

Subject: Public Procurement (Preference to Make in India) to provide for Purchase Preference (linked with local content) in respect of Power Sector.

Reference: Department for Promotion of Industry and Internal Trade (DPIIT) Notification No. P-45021/2/2017-PP (BE-II) dated 16.09.2020.

The Government of India, Department for Promotion of Industry and Internal Trade (DPIIT) issued Public Procurement (Preference to Make in India), Order 2017, for encouraging 'Make in India' and promoting manufacturing and production of goods and services in India with a view to enhancing income and employment. Subsequently, DPIIT vide order No. P-45021/2/2017-PP (BE-II) dated 4th June, 2020 and further vide order dated 16th September, 2020 have issued the revised Public Procurement (Preference to Make in India) Order 2017.

2. In light of the Public Procurement (Preference to Make in India) Order 2017, this Ministry had notified purchase preference (linked with local content) for Hydro and Transmission sectors vide Order No. 11/05/2018-Coord dated 20.12.2018, for Thermal sector vide Order dated 28.12.2018 and for Distribution sector vide Order dated 17.03.2020. Further, a combined order dated 04.04.2020 was also issued in supersession of all previous orders to indicate equipment/material/components for which there was sufficient local capacity and competition and also to indicate conditions for including suitably in the tenders to be issued by the procurers. In furtherance of Para 19 of the DPIIT Notification No. P-45021/2/2017-PP(BE-II) dated 04.06.2020, Ministry of Power (MoP) issued a revised comprehensive Order dated 28.07.2020 (Annexure-I amended by order dated 17.09.2020).

3. DPIIT Notification No. P-45021/2/2017-PP(BE-II) dated 16.09.2020 has further revised its order dated 04.06.2020. Therefore, in supersession of all the aforementioned orders including order No.10/1/2019-St.Th. (Part-II) dated 20.03.2020 issued by this Ministry, the following has been decided:

- i. For the purpose of this order, the definitions of various terms used in the order, and provisions relating to (i) Eligibility of 'Class-I local supplier'/'Class-II local supplier'/'Non-local suppliers' for different types of procurement, (ii) purchase preference (iii) exemption to small purchases and (iv) margin of purchase preference shall be the same as in DPIIT order dated 16.09.2020, referred to above and extracts of the same is given at **Appendix**.
- ii. In procurement of all goods and services or works in respect of which there is sufficient local capacity and local competition as in **Annexure-I**, only "Class-I local supplier" shall be eligible to bid irrespective of purchase value. "Class-I local supplier" is a supplier or service provider whose goods, services or works offered for procurement meets the Minimum Local Content (MLC) as prescribed in Annexure-I of this order. "Class-II local supplier" means a

supplier, as defined by DPIIT in its Order No. P-45021/2/2017-PP (BE-II) dated 16-09-2020.

- iii. In the procurement of all goods and services or works other than those listed in Annexure-I, only "Class-I local supplier" and "Class-II local supplier" as defined in the order of this Ministry herewith shall be eligible to bid in procurement undertaken by procuring entities, except when Global Tender Enquiry has been issued. In Global tender enquiries, "Non-local suppliers" shall also be eligible to bid along with "Class-I local suppliers" and "Class-II local suppliers". In procurement of all goods, services or works not covered by sub-para 3(ii) above, and with estimated value of purchases less than Rs. 200 crores, in accordance with Rule 161(iv) of GFR, 2017, Global Tender Enquiry(GTE) shall not be issued except with the approval of the competent authority as designated by Department of Expenditure.
- iv. For the purpose of this order, 'Works' means all works as per Rule 130 of GFR- 2017, and will also include 'turnkey works', Engineering, Procurement and Construction (EPC) contracts and service contracts including System Integrator (SI) contracts.

4. The list of items, in respect of which, local capacity with sufficient competition exists as per **Annexure-I**, will be reviewed at regular intervals with a view to increase number of items in this list and also to increase the MLC for each item, wherever it is less than 100%.

5. Purchase preference shall be given to local suppliers in accordance with **para 3A** of DPIIT Order dated 16.09.2020, and extracts of the same are given at **Appendix**.

6. Further, it has been decided to constitute a committee for independent verification of self-declarations and auditor's / accountant's certificates on random basis and in the case of complaints. The composition of the committee is given below:

Member (Planning), Central Electricity Authority (CEA)	Chairperson
Chief Engineer (PSETD), CEA	Member
Chief Engineer (HETD), CEA	Member
Chief Engineer (TETD), CEA	Member
Chief Engineer (DP&R), CEA	Member
As may be co-opted by CEA	External Expert
Chief Engineer (R&D), CEA	Convener

7. Further, it has also been decided to constitute a committee to examine the grievances in consultation with stakeholders and recommend appropriate actions to the Competent Authority in MoP. The composition of the Committee is given below:

Chairperson, CEA	Chairperson
Member (Hydro), CEA	Member

Member (Power System), CEA	Member
Member (Thermal), CEA	Convener

8. The complaint fee of Rs. 2 Lakhs or 1% of the value of the local item being procured (subject to maximum of Rs. 5 Lakhs), whichever is higher, shall be paid in the form of Demand Draft, drawn in favour of **PAO, CEA, New Delhi**. In case the complaint is found to be incorrect, the complaint fee shall be forfeited. In case, the complaint is upheld and found to be substantially correct, the deposited fee of the complainant would be refunded without any interest.

9. All other conditions, not stipulated in this order, shall be as laid down in the DPIIT's order No. P-45021/2/2017-PP (BE-II) dated 16.09.2020.

10. This order shall be applicable in respect of the procurement made by all attached or subordinate offices or autonomous bodies under the Government of India including Government Companies as defined in the Companies Act, and /or the States and Local Bodies making procurement under all Central Schemes/ Central Sector Schemes where the Scheme is fully or partially funded by the Government of India. The aforesaid orders shall also be applicable in respect of projects wherein funding of goods, services or works is by Power Finance Corporation (PFC) /Rural Electrification Corporation (REC) and any Financial Institution in which Government of India/ State Government share exists. This order shall be applicable to Tariff Based Competitive Bidding (TBCB) projects also. Procuring entities as defined in the DPIIT's Order dated 16.09.2020 are advised to revise their tender documents to fully comply with the said DPIIT's Order and the subsequent Orders that would be issued in this regard by DPIIT/ this Ministry from time to time.

11. All tenders for procurement by Central Government Agencies or the States and Local Bodies, as the case may be, have to be certified for compliance of the Public Procurement (Preference to Make in India) 'PPP-MII' Order by the concerned procurement officer of the Government Organization before uploading the same on the portal.

12. Exemption from meeting the stipulated local content is allowed as per clause 13 and 13A of PPP-MII Order dated 16.09.2020, if the manufacturer declares that the item is manufactured in India under a License from a foreign Manufacturer who holds Intellectual Property Rights (IPRs) and there is Transfer of Technology (ToT) with phasing to increase Minimum Local Content. For such items, if any CPSE under the administration of Ministry of Power requests exemption for any item, it shall be considered by Ministry of Power, on case to case basis.

13. In order to further encourage Make in India initiatives and promote manufacturing and production of goods and services in India, general guidelines as enclosed at **Annexure-II** may be adopted in an appropriate manner according to the circumstances by the procuring entities in their tendering process.

14. The procurers may specify the higher values of MLC than those specified in this Order in respect of goods, services or works covered in their tenders and award the weightage to the product of higher MLC for which they have to specify the criteria beforehand in their tender. The values given in Annexure-I are the minimum prescribed values for becoming a class-I local supplier for the products indicated therein.

15. This issues with the approval of Hon'ble Minister for Power and New & Renewable Energy.



(S. Majumdar)

Under Secretary to the Government of India
Tele No. 011- 23356938

To:

1. Secretary to Government of India (All Ministries/ Departments of Government of India) (As per list)
2. Secretary (Coordination), Cabinet Secretariat
3. CEO, NITI Aayog
4. Chief Secretaries of all States/ UTs
5. Comptroller and Auditor General of India
6. Secretary, DPIIT, Chairman of Standing Committee for implementation of Public Procurement Order, 2017
7. Director General, Bureau of Indian Standards (BIS)
8. Joint Secretary, DPIIT, Member-Convener of Standing Committee for implementation of Public Procurement Order, 2017
9. Chairperson, CEA
10. CMDs of CPSEs, CMD NLC, Chairman of DVC/ BBMB/ EESL, DGs of BEE/ CPRI/ NPTI
11. All Additional Secretaries/ JSs/ EA/ CE, Ministry of Power

Copy to:

Director (Technical), NIC with a request to publish the Order on the website of Ministry of Power

APPENDIX**Extracts of important provisions contained in DPIIT Order No. P-45021/2/2017-PP (BE-II) dated 16-09-2020****1. Definitions (Para 2 of DPIIT order):**

'Local content' means the amount of value added in India which shall, unless otherwise prescribed by the Nodal Ministry, be the total value of the item procured (excluding net domestic indirect taxes) minus the value of imported content in the item (including all customs duties) as a proportion of the total value, in percent.

'Class-I local supplier' means a supplier or service provider, whose goods, services or works offered for procurement, meets the minimum local content as prescribed for 'Class-I local supplier' under this Order.

'Class-II local supplier' means a supplier or service provider, whose goods, services or works offered for procurement, meets the minimum local content as prescribed for 'Class-II local supplier' but less than that prescribed for "Class-I Local supplier" under this Order.

'Non-Local supplier' means a supplier or service provider, whose goods, services or works offered for procurement, has local content less than that prescribed for 'Class-II local supplier' under this Order.

'L1' means the lowest tender or lowest bid or the lowest quotation received in a tender, bidding process or other procurement solicitation as adjudged in the evaluation process as per the tender or other procurement solicitation.

'Margin of purchase preference' means the maximum extent to which the price quoted by a 'Class-I local supplier' may be above the L1 for the purpose of purchase preference.

'Nodal Ministry' means the Ministry or Department identified pursuant to this order in respect of a particular item of goods or services or works.

'Procuring entity' means a Ministry or department or attached or subordinate office of, or autonomous body controlled by, the Government of India and includes Government companies as defined in the Companies Act.

'Works' means all works as per Rule 130 of GFR- 2017, and will also include 'turnkey works'.

2. Eligibility of 'Class-I local supplier'/ 'Class-II local supplier'/ 'Non-local suppliers' for different types of procurement (Para 3 of DPIIT order)

(a) In procurement of all goods, services or works in respect of which the Nodal Ministry / Department has communicated that there is sufficient local capacity and local competition, only 'Class-I local supplier', as defined under the Order, shall be eligible to bid irrespective of purchase value.

(b) Only 'Class-I local supplier' and 'Class-II local supplier', as defined under the Order, shall be eligible to bid in procurements undertaken by procuring entities, except when Global tender enquiry has been issued. In global tender enquiries, 'Non-local suppliers' shall also be eligible to bid along with 'Class-I local suppliers' and 'Class-II local suppliers'. In procurement of all goods, services or works, not covered by 3(a) above, and with estimated value of purchases less than Rs 200 crores, in accordance with Rule 161(iv) of GFR, 2017 Global tender enquiry shall not

be issued except with the approval of competent authority as designated by Department of Expenditure.

(c) For the purpose of this Order, works includes Engineering, Procurement and Construction (EPC) contracts and services include System Integrator (SI) contracts.

3. Purchase Preference (Para 3A of DPIIT order)

(a) Subject to the provisions of this Order and to any specific instructions issued by the Nodal Ministry or in pursuance of this Order, purchase preference shall be given to 'Class-I local supplier' in procurements undertaken by procuring entities in the manner specified here under.

(b) In the procurements of goods or works, which are covered by para 3(b) of DPIIT Order No. P-45021/2/2017-PP(BE-II) dated 16-09-2021 and which are divisible in nature, the " 'Class-I local supplier' shall get purchase preference over 'Class-II local supplier' as well as 'Non-local supplier', as per following procedure:

- i. Among all qualified bids, the lowest bid will be termed as L1. If L1 is 'Class-I local supplier', the contract for full quantity will be awarded to L1.
- ii. If L1 bid is not a 'Class-I local supplier', 50% of the order quantity shall be awarded to L1. Thereafter, the lowest bidder among the 'Class-I local supplier' will be invited to match the L1 price for the remaining 50% quantity subject to the Class-I local supplier's quoted price falling within the margin of purchase preference, and contract for that quantity shall be awarded to such 'Class-I local supplier' subject to matching the L1 price. In case such lowest eligible 'Class-I local supplier' fails to match the L1 price or accepts less than the offered quantity, the next higher 'Class-I local supplier' within the margin of purchase preference shall be invited to match the L1 price for remaining quantity and so on, and contract shall be awarded accordingly. In case some quantity is still left uncovered on Class-I local suppliers, then such balance quantity may also be ordered on the L1 bidder.

(c) In the procurements of goods or works, which are covered by para 3(b) of DPIIT Order No. P-45021/2/2017-PP(BE-II) dated 16-09-2021 and which are not divisible in nature, and in procurement of services where the bid is evaluated on price alone, the 'Class-I local supplier' shall get purchase preference over 'Class-II local supplier' as well as 'Non-local supplier', as per following procedure:

- iii. Among all qualified bids, the lowest bid will be termed as L1. If L1 is 'Class-I local supplier', the contract will be awarded to L1,
- iv. If L1 is not 'Class-I local supplier', the lowest bidder among the 'Class-I local supplier', will be invited to match the L1 price subject to Class-I local supplier's quoted price falling within the margin of purchase preference, and the contract shall be awarded to such 'Class-I local supplier' subject to matching the L1 price.
- v. In case such lowest eligible 'Class-I local supplier' fails to match the L1 price, the 'Class-I local supplier' with the next higher bid within the margin of purchase preference shall be invited to match the L1 price and so on and contract shall be awarded accordingly. In case none of the 'Class-I local supplier' within the margin of purchase preference matches the L1 price, the contract may be awarded to the L1 bidder.

(d) "Class-II local supplier" will not get purchase preference in any procurement, undertaken by procuring entities.

4. Applicability in tenders where contract is to be awarded to multiple bidders (Para 3B of DPIIT order)-

In tenders where contract is to be awarded to multiple bidders subject to matching of L1 rates or otherwise, the 'Class-I local supplier' shall get purchase preference over 'Class-II local supplier' as well as 'Non-local supplier', as per following procedure:

a) In case there is sufficient local capacity and competition for the items to be procured, as notified by the Nodal Ministry, only 'Class-I local supplier' shall be eligible to bid. As such, the multiple supplier who would be awarded the contract, should be all and only 'Class-I local suppliers'.

b) In other cases, 'Class-II local suppliers' and 'Non-Local suppliers' may also participate in the bidding process along with 'Class-I local supplier' as per provisions of this order.

c) If 'Class-I local supplier' qualify for award of contract for at least 50% of the tendered quantity in any tender, the contract may be awarded to all the qualified bidders as per award criteria stipulated in the bid documents. However, in case 'Class-I local supplier' do not qualify for award of the contract for at least 50% of the tendered quantity, purchase preference should be given to the 'Class-I local supplier' over 'Class-II local supplier'/'Non-local suppliers' provided that their quoted rate falls within 20% margin of purchase preference of the highest quoted bidder considered for award of contract so as to ensure that the 'Class-I local suppliers' taken in totality or considered for award of contract for at least 50% of the tendered quantity.

d) First purchase preference has to be given to the lowest quoting 'Class-I local supplier', whose quoted rates fall within 20% margin of purchase preference subject to its meeting the prescribed criteria for award of contract as also the constraints of maximum quantity that can be sourced from any single supplier. If the lowest quoting 'Class-I local supplier', does not qualify for purchase preference because of aforesaid constraints or does not accept the offered quantity, an opportunity may be given to next higher 'Class-I local supplier' falling within 20% margin of purchase preference, and so on.

e) To avoid any ambiguity during bid evaluation process, the procuring entities may stipulate its own tender specific criteria for award of contract amongst different bidders including the procedure for purchase preference to 'Class-I local supplier' within the broad policy guidelines stipulate in sub-paras above.

5. Exemption of small purchases (Para 4 in DPIIT order): Procurements where the estimated value to be procured is less than Rs. 5 lakhs shall be exempt from this Order. However, it shall be ensured by procuring entities that procurement is not split for the purpose of avoiding the provisions of this Order.

6. Minimum Local Content (Para 5 in DPIIT order): The 'local content' requirement to categorize a supplier as 'Class-I local supplier' is minimum 50%. For 'Class-II local supplier', the local content requirement is minimum 20%. Nodal Ministry/Department may prescribe only a higher percentage of minimum local content requirement to categorize a supplier as 'Class-I local supplier'/'Class-II local supplier'. For the item for which Nodal Ministry/Department has not prescribed higher minimum local content notification under the order, it shall be 50% and 20% for 'Class-I local supplier'/'Class-II local supplier' respectively.

7. Vide DPIIT OM No. P-45021/102/2019-BE-IIPart(1) (E-50310) dated 4.03.2021 services such as transportation, insurance, installation, commissioning, training and after sales service support like AMC/CMC etc. shall not be considered as local value addition. Bidders offering imported products will fall under the category of Non- local suppliers. They can't claim themselves as Class-I local suppliers/Class-II local suppliers by claiming the services such as transportation, insurance, installation, commissioning, training and after sales service support like AMC/CMC etc. as local value addition.
8. **Margin of Purchase Preference (Para 6 of DPIIT order):** The margin of purchase preference shall be 20%.
9. **Specifications in Tenders and other procurement solicitations (Para 10 of DPIIT order):**
- a. Every procuring entity shall ensure that the eligibility conditions in respect of previous experience fixed in any tender or solicitation do not require proof of supply in other countries or proof of exports.
 - b. Procuring entities shall endeavour to see that eligibility conditions, including on matters like turnover, production capability and financial strength do not result in unreasonable exclusion of 'Class-I local supplier'/ 'Class-II local supplier' who would otherwise be eligible, beyond what is essential for ensuring quality or creditworthiness of the supplier.
 - c. Procuring entities shall, within 2 months of the issue of this Order review all existing eligibility norms and conditions with reference to sub-paragraphs 'a' and 'b' above.
 - d. **Reciprocity Clause:**
 - i. When a Nodal Ministry/Department identifies that Indian suppliers of an item are not allowed to participate and/ or compete in procurement by any foreign government, due to restrictive tender conditions which have direct or indirect effect of barring Indian companies such as registration in the procuring country, execution of projects of specific value in the procuring country etc. it shall provide such details to all its procuring entities including CMDs/CEOs of PSEs/PSUs, State Governments and other procurement agencies under their administrative control and GeM for appropriate reciprocal action.
 - ii. Entities of countries which have been identified by the nodal Ministry/Department as not allowing Indian companies to participate in their Government procurement for any item related to that nodal Ministry shall not be allowed to participate in Government procurement in India for all the items related to that nodal Ministry/Department, except for the list of items published by the Ministry/Department permitting their participation.
 - iii. The stipulation in (ii) above shall be part of all tenders invited by the Central Government procuring entities stated in (i) above. All purchase on GeM shall also necessarily have the above provisions for items identified by nodal Ministry/Department.
 - iv. State Governments should be encouraged to incorporate similar provisions in their respective tenders.
 - v. The term 'entity' of a country shall have the same meaning as under the FDI Policy of DPIIT as amended from time to time.
 - e. Specifying foreign certification/ unreasonable technical specifications/ brands/ models in the bid document is restrictive and discriminatory practice against local

suppliers. If foreign certification is required to be stipulated because of non-availability of Indian Standards and/ or for any other reason, the same shall be done only after written approval of Secretary of Department concerned or any other authority having been designated such power by the Secretary of the Department concerned.

- f. "All administrative Ministries/Departments whose procurement exceeds Rs. 1000 Crore per annum shall notify/ update their procurement projections every year, including those of PSEs/PSUs, for the next 5 years on their respective website."

Annexure-I

Sl. No.	Electrical Equipment for Generation, Transmission and Distribution sectors with sufficient local capacity and competition	Class-I Local Supplier (Minimum Local Content (%))
(A) Common items for Transmission, Distribution and Generation Sector		
1	Power Transformers (up to 765 kV, including Generator transformers)	60
2	Instrument Transformer (up to 765 kV)	60
3	Transformer Oil Dry Out System (TODOS)	60
4	Reactors up to 765 kV	60
5	Oil Impregnated Bushing (up to 400 kV)	60
6	Resin Insulated Paper (RIP) bushings (up to 145 kV)	50
7	Circuit Breakers (up to 765 kV AC - Alternating Current)	60
8	Disconnectors/Isolators (up to 765 kV AC)	60
9	Wave trap (up to 765 kV AC)	60
10	Oil Filled Distribution Transformers up to & Including 33 kV [Cold Rolled Grain Oriented (CRGO)/Amorphous, Aluminium/Copper wound]	60
11	Dry Type Distribution Transformer upto and including 33 kV (CRGO/Amorphous, Aluminium/Copper wound)	60
12	Conventional Conductor	60
13	Accessories for Conventional conductors	60
14	High Temperature/High Temperature Low Sag (HTLS) conductors (such as Composite core, GAP, ACSS, INVAR, AL59) and Accessories	60
15	Optical ground wire (OPGW) – all designs	60
16	Fiber Optic Terminal Equipment (FOTE) for OPGW	50
17	OPGW related Hardware and Accessories	60
18	Remote Terminal Unit (RTU)	50
19	Power Cables and accessories up to 33 kV	60
20	Control cables including accessories	60
21	XLPE Cables up to 220 kV	60
22	Substation Structures	60
23	Transmission Line Towers	60
24	Porcelain (Disc/Long Rod) Insulators	60
25	Bus Post Insulators (Porcelain)	60
26	Porcelain Disc Insulators with Room Temperature Vulcanisation (RTV) coating	50
27	Porcelain Longrod Insulators with Room Temperature Vulcanisation (RTV) coating	50
28	Hardware Fittings for Porcelain Insulators	60
29	Composite/Polymeric Long Rod Insulators	60
30	Hardware Fittings for Polymer Insulators	60
31	Bird Flight Diverter (BFD)	60
32	Power Line Carrier Communication (PLCC) System (up to 800 kV)	60
33	Gas Insulated Switchgear (up to 400 kV AC)	60
34	Gas Insulated Switchgear (above 400 kV AC)	50
35	Surge/Lightning Arrester (up to 765 kV AC)	60
36	Power Capacitors	60
37	Packaged Sub-station (6.6 kV to 33 kV)	60
38	Ring Main Unit (RMU) (up to 33 kV)	60
39	Medium Voltage (MV) GIS Panels (up to 33 kV)	60
40	Automation and Control System/Supervisory Control and data Acquisition (SCADA) System in Power System	50
41	Control and Relay Panel (including Digital/Numerical Relays)	50
42	Electrical Motors 0.37 kW to 1 MW	60
43	Energy Meters excluding smart meters	50
44	Control & power cables and Accessories (up to 1.1 kV)	60
45	Diesel Generating (DG) set	60

Sl. No.	Electrical Equipment for Generation, Transmission and Distribution sectors with sufficient local capacity and competition	Class-I Local Supplier (Minimum Local Content (%))
46	DC system (DC Battery & Battery Charger)	60
47	AC & DC Distribution Board	60
48	Indoor Air Insulated Switchgear (AIS) upto 33 kV	60
49	Poles (PCC, PSCC, Rolled Steel Joist, Rail Pole, Spun, Steel Tubular)	60
50	Material for Grounding/earthing system	60
51	Illumination system	60
52	Overhead Fault Sensing Indicator (FSI)	50
53	Power Quality Meters	50
54	Auxilliary Relays	50
55	Load Break Switch	50
	(B) Hydro Sector	
56	Hydro Turbine & Associated equipment	
	a) Francis Turbine	60
	b) Kaplan Turbine	60
	c) Pelton Turbine	50
57	Main Inlet Valve & Associated Equipment	60
58	Penstock Protection Valve and Associated Equipment	60
59	Governing system & Accessories	60
60	Generator for Hydro Project & Associated Equipment	60
61	Static Excitation System	60
62	Workshop Equipment	60
63	Cooling Water System	60
64	Compressed Air System	60
65	Drainage/Dewatering System	60
66	Fire Protection System	60
67	Heating, Ventilation & Air Conditioning System (HVAC)	60
68	Oil Handling System	60
69	Mechanical Balance of Plant (BOP) Items	60
	(C) Thermal Sector	
	Boiler Auxiliaries	
70	Air Pre-Heater	60
71	Steam Coil Air Pre Heater (SCAPH)	60
72	Steam soot blowers [wall blowers & Long Retractable Soot Blower (LRSB)]	60
73	Auxiliary Steam Pressure Reducing & Desuperheating (PRDS)	60
74	Fuel oil system	60
75	Seal air Fan	60
76	Ducts and dampers	60
77	Duct expansion joints	60
78	Blowdown tanks	60
79	Coal burners and oil burners	60
80	Coal mills	60
81	Gear Box of Coal Mill	50
82	Coal feeders	60
83	Primary Air Fans	60
84	Forced Draft Fans	60
85	Induced Draft Fans	60
86	Forced Draft (FD)/Induced Draft (ID)/ Primary Air (PA) Fan Servo Motor Assembly	50
87	Tubes (Carbon Steel)	50
88	Steam pipes (Carbon Steel)	50
89	Steam drum	50
90	Separator	50
91	Selective Catalytic Reduction (SCR)	50

Sl. No.	Electrical Equipment for Generation, Transmission and Distribution sectors with sufficient local capacity and competition	Class-I Local Supplier (Minimum Local Content (%))
	Electro-Static Precipitators (ESPs)	
92	Casing	60
93	Electrodes	60
94	Rapping System	60
95	Hopper Heaters	60
96	Transformer Rectifiers	60
97	Insulators	60
	Turbine & Auxiliaries	
98	Turbine (High Pressure/Intermediate Pressure/Low Pressure)	50
99	Condensate Extraction Pumps	60
100	Condenser On line Tube Cleaning System (COLTC)	60
101	Debris filters	60
102	Deaerator	60
103	Drain Cooler and Flash Tank	60
104	ECW Pump	50
105	Plate Heat Exchanger	50
106	Self- cleaning filters	50
107	Condensate Polishing Units (CPUs)	60
108	Chemical Dosing System	60
109	Oil Filter	60
110	Gland Steam Condenser	60
111	Oil Purifying Centrifuge	50
112	Water Cooled Condenser	50
113	Boiler Feed Pumps (BFPs)	50
	Generator and Auxilleries	
114	Generator (including Seal Oil System, Hydrogen Cooling System, Stator water cooling system)	60
	Electrical Works	
115	Control and metering equipment	60
	Control & Instrumentation System (C&I System)	
116	Thermocouples	50
117	Measuring instruments [Resistance Temperature Detectors (RTDs)], Local gauges	50
118	Actuators (Pneumatic and conventional electric)	50
119	Interplant Communication/ Public Address (PA) system except IP based	50
	Coal Handling Plant	
120	Conveyors	60
121	Wagon Tippler	60
122	Side Arm Charger	60
123	Paddle feeder	60
124	Crushers & Screens	60
125	Dust suppression (dry fog & plain water) system	60
126	Air Compressors	50
127	Magnetic separators & metal detectors	60
128	Coal Sampling System	60
129	Stacker cum reclaimers	60
130	Belt weighing & monitoring system.	60
131	Wheel & axle assembly (without bearings) for Bottom Opening Bottom Release (BOBR) Wagons	60
	Ash Handling System	
132	Clinker grinder	60
133	Water jet ejectors	60
134	Scraper chain conveyor	60
135	Dry fly ash vacuum extraction system	60
136	Pressure pneumatic conveying system	60

Sl. No.	Electrical Equipment for Generation, Transmission and Distribution sectors with sufficient local capacity and competition	Class-I Local Supplier (Minimum Local Content (%))
137	Ash water & ash slurry pumps	60
138	Compressors, air dryers & air receivers	50
139	Ash water recovery system	60
	Raw Water Intake & Supply System	
140	Travelling water screens	60
141	Raw water supply pumps	60
142	Valves, RE joints etc.	60
	Water Treatment System and Effluent Treatment System	
143	Clarification plant	60
144	Filtration plant	60
145	Ultra filtration plant	50
146	Reverse Osmosis (RO) plant and its membrane	55
147	De-Mineralised water plant (DM Plant)	60
148	Chlorination plant	60
149	Chemical dosing system	60
150	Effluent Treatment Plant	60
	Circulating Water (CW) & Auxiliary Circulating Water (ACW) System	
151	CW & ACW Pumps	60
152	Butter Fly (BF) valves, Non-return Valves (NRVs) etc.	60
153	Rubber Expansion (RE) joints	60
154	Air release valves	60
	Cooling Towers (NDCT/ IDCT)-Natural-Draft and Induced Draft Cooling Tower	
155	Water Distribution System	60
156	Spray nozzles	60
157	Packing	60
158	Drift eliminators	60
159	Cooling Tower (CT) Fans (for Induced Draft Cooling Towers IDCT)	60
160	Gear boxes, shafts & motors (for IDCT)	60
	Air Conditioning & Ventilation System	
161	Split & window air conditioners	60
162	Chilling/ condensing unit [upto 500 ton of refrigeration(TR)]	55
163	Air Handling Unit (AHU) and Fresh air unit	60
164	Cooling Towers	60
165	Air Washing Units (AWUs), axial fans, roof extractors	60
166	Ducts, louvers & dampers	60
	Flue Gas Desulphurization (FGD)	
167	Spray Nozzles,	50
168	Spray header	50
169	Oxidation Blowers	50
170	Limestone wet Ball Mill	50
171	Slurry Handling Pumps for FGD system	50
172	Booster Fans for FGD system	50
173	Carbon Steel Ducts and Dampers for FGD	60
174	Storage Tanks and Silos	60
175	Process Water Pump for FGD system	50
	(D) Other Common Items	
	Fire protection and detection system	
176	Motor driven fire water pumps	60
177	Diesel engine driven fire water pumps	60
178	Hydrant system for the power plant.	60
179	High velocity water spray system	60
180	Medium velocity water spray system	60
181	Foam protection system	60
182	Inert gas flooding system	60

Sl. No.	Electrical Equipment for Generation, Transmission and Distribution sectors with sufficient local capacity and competition	Class-I Local Supplier (Minimum Local Content (%))
183	Fire tenders	60
184	Portable fire-extinguishers	60
185	Cranes, EOT cranes, gantry crane & chain pulley blocks etc.	60
186	Elevator	60

(E) Minimum Local Content percentages in Engineering, Procurement & Construction (EPC) / Turnkey project

In case the contract is awarded through the EPC route, the contractor should comply with the requirement of MLC for individual items as listed in Annexure-I and should purchase these items only from Class-I Local supplier. In addition, MLC for complete EPC project may also be prescribed as below:

	(1) Package Based Works	Minimum Local Content (%)
1	Boiler	60
2	TG System (Water Cooled Condenser)	60
3	Ash Handling Plant	60
4	Coal Handling Plant	60
5	Electro-static Precipitator (ESP)	60
6	Circulating Water (CW) System	60
7	Cooling Tower	60
8	Water Treatment System	60
9	Air Conditioning System (below 500TR)	60
10	Flue Gas Desusphurisation (FGD) System	60
11	Station Control & Instrumentation (C&I)	50
12	Hydro Power Projects (Electro-Mechanical Works)	60
	Gas based generation	
	Overall Gas Turbine Package (on finished Product basis)	
13	< 44 MW	60
14	44 –145 MW	50
	Overall Combined Cycle Gas Turbine (CCGT) Package (on finished Product basis)	
15	< 44 MW	60
16	44 – 145 MW	60
17	> 150 MW	60
	(2) Project as a whole	
1	Works and service contracts in Power Sector	60
2	Transmission Line with Conventional conductors (ACSR, AAAC, AL-59 etc.)	60
3	Transmission Line with High temperature Low Sag (HTLS) conductors	60
4	HVAC Substation Air Insulated (AIS)	60
5	HVAC Substation Gas Insulated (GIS)	60
6	HVDC Substation	60
7	Distribution Sector	60

Annexure-II**General guidelines to be adopted selectively in an appropriate manner by the procuring entities in their tender documents.**

1. The bidder shall have to be an entity registered in India in accordance with law.
2. The bids shall be in the language as prescribed by the tenderer/procurer.
3. The bids shall be in Indian Rupees (INR) (in respect of local content only).
4. Indian subsidiaries of foreign bidders shall have to meet the qualifying criteria in terms of capability, competency, financial position, past performance etc.
5. The bidder shall follow Indian laws, regulations and standards.
6. To be eligible for participation in the bid, foreign bidders shall compulsorily set up their manufacturing units on a long term basis in India as may be specified by the tenderer/ procurer.
7. Similar or better technology than the technology offered in respect of material, equipment and process involved shall be transferred to India. Along with the transfer of technology, adequate training in the respective field shall also be provided.
8. Country of origin of the equipment/material shall be provided in the bid.
9. For supply of equipment / material from the country of origin other than India, the bidder shall submit performance certificate in support of satisfactory operation in India or a country other than the country of origin having climatic and operational conditions including ambient temperature similar to that of India for more than _____ years (to be specified by the procurer).
10. The technologies/ products offered shall be environmental friendly, consuming less energy, safe, energy efficient, durable and long lasting under the prescribed operational conditions.
11. The supplier shall ensure supply of spares, materials and technological support for the entire life of the project.
12. The manufacturers/ supplier shall list out the products and components producing Toxic E-waste and other waste as may be specified. It shall have an Extended Producers Responsibility (EPR) so that after the completion of the lifecycle, the materials are safely recycled / disposed of by the Manufacturer/ supplier and for this, the Manufacturer/supplier along with procurer has to establish recycling / disposal unit or as may be specified.
13. Minimum Local Content requirement for goods, services or works shall be in accordance with the conditions laid down in respective Order(s) of the sectors on Public Procurement (Preference to Make in India) to provide for purchase preference (linked with local content).

14. The equipment/ material sourced from foreign companies may be tested in accredited labs in India before acceptance wherever such facilities are available.
15. The Tender fee and the Bank Guarantee (BG) shall be in Indian Rupees only.
16. The bidder shall have to furnish a certificate regarding cyber security/safety of the equipment/process to be supplied/services to be rendered as safe to connect.
17. Applicable safety requirements shall be met. Regular safety audit shall be carried out by the manufacturer/ supplier.
18. Statutory laws/regulations including the labour and environmental laws shall be strictly complied with during supply, storage, erection, commissioning and operation process. A regular compliance report shall be submitted to the procurer/appropriate Authorities.
19. Formation of new joint venture in India shall be permitted only with the Indian companies.
20. Tendering by the agent shall not be accepted.
21. In case local testing is not considered necessary by the procurer, the original test report in the language prescribed by the procurer may be accepted. The translated test report shall not be accepted unless it is notarised.
22. Certification/compliance as per the Indian Standards/ International Standards/ Indian Regulations/ specified Standards shall be mandatory, where ever applicable.
23. Quality assurance of the product shall be carried out by the procurer or an independent third party agency appointed by the procurer. Manufacturing Quality Plan as approved by the procurer shall be followed by the manufacturer/supplier.
24. Wherever required by the procurer, foreign supplier shall establish fully functional service centers in India and shall keep spares/material locally for future needs of utilities.
25. Arbitration proceedings shall be instituted in India only and all disputes shall be settled as per applicable Indian Laws.

STANDARD TECHNICAL SPECIFICATION
for


ACSR Moose, ACSR Bersimis, ACSR Zebra & AAC Bull Conductor

SPECIFICATION NO: : TB-STD-316-019;
REVISION: 4
DATE: 04.08.2022



BHARAT HEAVY ELECTRICALS LIMITED
TRANSMISSION BUSINESS GROUP
NOIDA, UP (INDIA) – 201305

	Prepared by	Checked by	Approved by
Name	Shobhna Singh	Sanjeev Shrivastava/ Vivek Kapil	Aruna Gulati
Signature			
Date	05/08/22	05/08/22 5/8/22	5/8/22

	STANDARD TECHNICAL SPECIFICATION FOR ACSR MOOSE, ACSR BERSIMIS, ACSR ZEBRA & AAC BULL CONDUCTOR	SPECIFICATION NO. TB-STD-316-019	
		REVISION	04
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3	SECTION – II: DETAILED TECHNICAL REQUIREMENTS FOR MATERIAL UNDER SCOPE OF SUPPLIES	08
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Section-I: Scope, Bill of Quantities & Specific Technical Requirements

1.0 PURPOSE

This specification is intended for finalization of rate contract between BHEL TBG and bidder. Standard technical details as indicated in the specification shall be agreed upon between BHEL TBG and bidder. Project specific technical detail shall be made available to the bidder along with project enquiry.

2.0 SCOPE

This technical specification covers the requirements of design, manufacture, inspection and testing at manufacture's works, proper packing and delivery to site of **ACSR Moose/ ACSR Bersimis/ ACSR Zebra/ AAC Bull Conductor** conforming to this specification.

It is not the intent to specify herein all the details of design & manufacture of material. However, the material shall conform in all respects to high standard of design, engineering & workmanship and shall be capable of performing in continuous commercial operation at site condition.

Technical requirements of ACSR Moose/ ACSR Bersimis/ ACSR Zebra/ AAC Bull Conductor are indicated in Section-II & Technical Data Sheet.

No deviation from the requirements specified in various clauses of this specification shall be allowed. A duly signed & stamped certificate to this effect shall have to be furnished along with the offer in the format of as provided in the NIT document. Bidder shall mandatorily submit the format along with the offer and in case the certificate is not submitted, the offer will be deemed to be considered as without any technical deviations.

3.0 SPECIFIC TECHNICAL REQUIREMENTS

Specific technical requirements **ACSR Moose/ ACSR Bersimis/ ACSR Zebra/ AAC Bull Conductor** shall be as follows,

1. For ACSR conductor, it shall confirm to IEC: 61089:1991/AMD1:1997/ IS:398 (Part 5) -1992 (REAFFIRMED 2018) except where otherwise specified elsewhere.
2. For AAC conductor, it shall confirm to IEC: 61089:1991/AMD1:1997/ IS:398 (Part 1) -1996 (REAFFIRMED 2018) except where otherwise specified elsewhere.

4.0 BILL OF QUANTITIES

Refer ANNEXURE-BOQ.

Note:

1. The bidder to quote for items as per unpriced price schedule attached with NIT. **The quantity as mentioned in the BOQ is only for evaluation purpose.** However, actual ordered quantity may vary from project to project throughout the contract.
2. Quantity variation as per NIT terms & condition.
3. Separate project specific purchase order will be issued time to time within RC validity.
4. **Unit price of Conductor (Sl no. 1 to 4) should be inclusive of non-returnable wooden or returnable steel drum.**
5. For Item Sl. No. 5 & 6, Unit differential price to be Quoted for providing Non-returnable steel drum in place of non-returnable wooden or returnable steel drum as per the respective project

requirement.

6. Purchase order will be regularised based on the actual no. of Non-returnable steel drum required as mutually agreed between BHEL and vendor, as per the unit differential price quoted against Sl. No. 5 & 6.

5.0 DOCUMENTS & DRAWINGS TO BE SUBMITTED

Bidders shall submit following documents duly signed and sealed as the part of their technical offer for evaluation,

- (i) UNPRICED BOQ mentioning "QUOTED" against each item as per format given with NIT.
- (ii) Documents for meeting the TECHNICAL QUALIFICATION REQUIREMENTS.
- (iii) NIL Technical Deviations Certificate as per format given with NIT.

After placement of project specific Purchase order BHEL will provide project site information within one-week time.

Following documents shall be submitted for specific project requirement after placement of order for the approval of BHEL/Customer,

Sl. no.	Drawing / Document Description	Document no.	Document Type	First Submission	Resubmission
1	Technical Data Sheet (to be submitted for all projects except POWERGRID projects)	TB-XXX-316-E131	Primary	Within 2 week of PO	Within 1 week of comments
2	Quality Plan	TB-XXX-316-E132	Primary	Within 2 week of PO	Within 1 week of comments
3	Routine & Acceptance Test Reports	TB-XXX-316-E133	Secondary	Within 1 week of test conduction	--

Notes

1. Approval on Primary documents is essential for providing manufacturing clearance.
2. The bidder/ manufacturer may note that all re-submissions must incorporate all comments given in the prior submission by the Purchaser. Adequate justification for not incorporating the same must be submitted, failing which the submitted documents may be returned.

6.0 TECHNICAL QUALIFYING REQUIREMENT & EXPERIENCE

Technical qualifying requirement shall be as per TBEM/TQR/RC/CONDUCTOR Rev.0 attached herewith.

7.0 TYPE TESTING

The bidder shall submit the type tests reports for the tests conducted on the equipment(s) identical or similar to those to be supplied under this contract and the test(s) should have been conducted at an independent laboratory not earlier than ten (10) years from the date of original scheduled date of bid opening. If any type test report is found to be technically unacceptable, such type test(s) shall be conducted by the bidder without any cost and delivery implication to BHEL/customer.

The following type test reports of the conductor shall be submitted for approval,

Standard Technical Specification for ACSR Moose, ACSR Bersimis, ACSR Zebra & AAC Bull Conductor

-
1. UTS test on stranded conductor
 2. Corona extinction voltage test (dry)
 3. Radio interference voltage test (dry)
 4. DC resistance test on stranded conductor

The above type test (s) shall be carried out in line with procedure mentioned in the detailed technical specification for customer (including NTPC/PGCIL), for which item (s) is intended.

All acceptance, routine tests and tests during manufacture as per relevant standards and specification shall be deemed to be included in the bidder's scope.

8.0 QUALITY ASSURANCE, TESTING & INSPECTION

- 8.1 At contract stage, the successful bidder shall submit the Quality Plan (QP) for approval of BHEL/ end customer. **BHEL standard quality plan is enclosed as TBQM-STD-CONDUCTOR-1. NTPC standard quality plan is enclosed as TBQM-STD-CONDUCTOR-2.** The standard QP enclosed is for reference purpose and project specific approval shall be given only after project specific purchase order placement. In case the bidder has reference Quality Plan agreed with end customer, same can be submitted for specific project after award of contract for approval/ extension from BHEL/customer. There shall not be any commercial implication to BHEL on account of changes in Quality Plan (QP) during contract stage.
- 8.2 All materials shall be procured, manufactured, inspected and tested by vendor/ sub-vendor as per approved Quality Plan (QP). The supplier shall perform all tests necessary to ensure that the material and workmanship conform to the relevant standards and comply with the requirements of the specification.
- 8.3 The supplier shall perform all routine and acceptance tests during manufacturing as per requirement of the specification. The material shall be offered for inspection by BHEL/customer in accordance with agreed Quality Plan (QP) with 1 Week advance information. Commercial implications, if any for all these tests shall be deemed to be included in the bid price.
- 8.4 For POWERGRID Purchase order, POWERGRID approved standard quality plan will be applicable.

9.0 PACKING AND MARKING

The material shall be packed to ensure protection against damage during transit, storage for prolonged periods and handling.

The drum shall be properly marked as per following details,

1. Name & Address of Consignee
2. Purchase Order Number with Date
3. Name of Supplier
4. Description of Materials along with size/ length etc.

10.0 ABBREVIATIONS USED

- NIT: Notice Inviting Tender
- QP: Quality Plan
- BOQ: Bill of Quantities
- IS: Indian Standard
- IEC: International electro-technical commission

Standard Technical Specification for ACSR Moose, ACSR Bersimis, ACSR Zebra AAC Bull Conductor

ANNEXURE-BOQ

Sl.No.	PROJECT	UNIT	FLEXIBLE CONDUCTOR QUANTITY)			
			MOOSE	BERSIMIS	ZEBRA	BULL
1	PARADIP-ERSAMA	km	1.5	0	0	0
2	PARADIP-DUBRI	km	3.3	0	0	0
3	TALCHAR	km	8	0	0	0
4	NEEMUCH	km	10	18.5	0	9.5
5	FUTURE ANTICIPATED PROJECTS IN COMING 2 YEARS	km	7.2	6.5	5	5.5
	TOTAL	km	30	25	5	15

Note: Unit price of Conductor should be inclusive of non-returnable wooden or returnable steel drum.

Quantity of Non-returnable steel drum (for evaluation purpose)

Sl. No.	ITEM DESCRIPTION	UNIT	QUANTITY
1	Differential price for supply of conductor on Non-returnable steel drum for ACSR conductor	No.	1
2	Differential price for supply of conductor on Non-returnable steel drum for AAC conductor	No.	1

Flabing

Sarfaraz

*Muchhalgi
5-8-22*

PROJECT :			MANUFACTURING QUALITY PLAN											
PACKAGE :			ITEM : Overhead Conductor											
CONTRACT NO.:			QP NO.: TBQM-STD-CONDUCTOR-1											
MAIN SUPPLIER : BHEL			PAGE 1 OF 4											
SL. NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	Quantum of Check		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD		AGENCY			REMARKS
					M	C/N			9	D*	M	C	N	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1.0 RAW MATERIAL														
1.1 Aluminium Wire Rod.														
a)	Chem. Composition	Chemical	Major	Measurement	One Sample from 4MT or Part thereof	IS 4026-1976	IS 4026-1976	Supplier TC/Third Party TC	P	V	V	V		
b)	Diameter	Dimensional Check	Major	Measurement	One sample from each coil	Tech.Spec./IS :5484	Tech.Spec./IS :5484	Supplier TC/QC Record	P	V	V	V		
c)	Breaking load/Tensile Test	Mechanical	Major	Measurement	One sample from each coil	Tech.Spec./IS :5484	Tech.Spec./IS :5484	-do-	P	V	V	V		
d)	Resistivity/Conductivity	Electrical	Major	Measurement	-do-	Tech.Spec./IS :5484	Tech.Spec./IS :5484	-do-	P	V	V	V		
e)	Elongation	Mechanical	Major	Measurement	-do-	Tech.Spec./IS :5484	Tech.Spec./IS :5484	-do-	P	V	V	V		
f)	Surface finish & Smoothness	Visual	Minor	Measurement	100% on each coil	Tech.Spec./IS :5484	Tech.Spec./IS :5484	QC Record	P	V	V	V		
1.2 Galvanized Steel Wire														
a)	Chemical analysis	Chemical	Major	Measurement	Three Samples per heat	Tech.Spec./IS :398	Tech.Spec./IS :398	Supplier TC	-	V	V	V		
b)	Dia of individual wire	Dimensional Check	Major	Measurement	One sample from each coil	Tech.Spec./IS :398	Tech.Spec./IS :398	Supplier TC/QC Record	P	V	V	V		
c)	Breaking load/Tensile Test	Mechanical	Major	Measurement	-do-	Tech.Spec./IS :398	Tech.Spec./IS :398	-do-	P	V	V	V		
d)	Torsion test	-do-	Major	Measurement	-do-	Tech.Spec./IS :398	Tech.Spec./IS :398	-do-	P	V	V	V		
e)	Elongation test	-do-	Major	Measurement	-do-	Tech.Spec./IS :398	Tech.Spec./IS :398	-do-	P	V	V	V		
<p>LEGEND:</p> <p>D: RECORDS IDENTIFIED WITH "TICK" SHALL BE ESSENTIALLY INCLUDED BY CONTRACTOR IN QA DOCUMENTATION M: MANUFACTURER/ SUB-CONTRACTOR C: CONTRACTOR/NOMINATED INSPECTION AGENCY N: Enduser P: PERFORM, W: WITNESS V: VERIFICATION CHP: IDENTIFIED IN COLUMN "N" AS "W"</p>														
<p>MANUFACTURER/ SUB-SUPPLIER</p> <p>SIGNATURE</p> <p>FORMAT NO.: QS-01-QAI-P-09/FI-RI</p>														
<p>DOC. NO. REV. CAT.</p> <p>REVIEWED BY APPROVED BY APPROVAL SEAL</p> <p>ENGG. DIV./QA & I</p>														

PROJECT :		MANUFACTURING QUALITY PLAN										REMARKS		
PACKAGE :		ITEM : Overhead Conductor												
CONTRACT NO.:		PAGE 2 OF 4												
MAIN SUPPLIER : BHEL														
SL. NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	Quantum of Check		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD		AGENCY			REMARKS
					M	C/N			RECORD	D*	M	C	N	
1	Wrapping test	-do-	4	Measurement	-do-	6	Tech.Spec./IS: 398	8	9	D*	**	10	11	
	Preece Test	Chemical	Major	Measurement	-do-	-do-	IS 4826/IS 2633	Tech.Spec./IS: 398	-do-	-do-	P	V	V	
	Wt. of Zinc Coating	Chemical	Major	Measurement	-do-	-do-	IS 4826/IS 2633 & GTP	IS 4826/IS 2633 & GTP	-do-	-do-	P	V	V	
2.0 IN PROCESS INSPECTION														
2.1 Aluminium drawn wire														
a)	Surface finish	Visual	Major	Measurement	100% of each spool	100% of each spool	Tech.Spec./IS: 398	The Wire shall be smooth & free from all imperfections such as spikes spites scale inclusions, die marks, scratches, fillings;	QC Record		P			
b)	Dia of wire	Dimentional Check	Major	Measurement	One sample from each spool	One sample from each spool	Tech.Spec./IS: 398	Tech.Spec./IS: 398	-do-		P			
c)	Breaking load/tensile Test	Mechanical	Major	Measurement	-do-	-do-	Tech.Spec./IS: 398	Tech.Spec./IS: 398	-do-		P			
d)	Resistance Measurement.	Electrical	Major	Measurement	-do-	-do-	Tech.Spec./IS: 398	Tech.Spec./IS: 398	-do-		P			
e)	Wrapping Test	Mechanical	Major	Measurement	-do-	-do-	Tech.Spec./IS: 398	Wire shall not crack or break	-do-		P			
f)	Joints	Visual	Major	Visual	100%	100%	Tech.Spec./IS: 398	No Joints	QC Record		P			
2.2 Steel Stranding														
a)	Lay ratio/ direction & compactness	Mechanical	Major	Measurement	One sample from each load	One sample from each load	Tech.Spec./IS: 398	Tech.Spec./IS: 398	QC Record		P			
b)	Joints	Visual	Major	Visual	100%	100%	Tech.Spec./IS: 398	No Joints	QC Record		P			
2.3 Conductor Stranding														
a)	Lay ratio/ direction & compactness	Mechanical	Major	Measurement	One sample from each load	One sample from each load	Tech.Spec./IS: 398	Tech.Spec./IS: 398	QC Record		P			
a1)	Inner Aluminium Layer	Mechanical	Major	Measurement	-do-	-do-	Tech.Spec./IS: 398	Tech.Spec./IS: 398	QC Record		P			
a2)	Outer Aluminium Layer	Mechanical	Major	Measurement	-do-	-do-	Tech.Spec./IS: 398	Tech.Spec./IS: 398	QC Record		P			
LEGEND:														
D: RECORDS IDENTIFIED WITH "TICK" SHALL BE ESSENTIALLY INCLUDED BY CONTRACTOR IN QA DOCUMENTATION M: MANUFACTURER/ SUB-CONTRACTOR C: CONTRACTOR/NOMINATED INSPECTION AGENCY N: Enduser P: PERFORM, W: WITNESS, V: VERIFICATION CHP:IDENTIFIED IN COLUMN "N" AS "W"														
MANUFACTURER/ SUB-SUPPLIER		MAIN SUPPLIER												
SIGNATURE														
FORMAT NO.:QS-01-QAI-P-09/FI-RI														
REVIEWED BY										APPROVED BY			APPROVAL SEAL	
ENG. DIV./QA & I														

PROJECT : NORTH KARANPURA STPP		MANUFACTURING QUALITY PLAN	
PACKAGE : 400KV SWITCHYARD		PAGE 3 OF 4	
CONTRACT NO.: CS-4410-001-2		ITEM : Overhead Conductor	
MAIN SUPPLIER : BHEL			

SL. NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	Quantum of Check		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD			REMARKS
					M	C/N			M	C	N	
1		3	4	5	6	6	7	8	9	10	11	
b)	Smoothness/Surface Scratches	Visual	Major	Visual	100%	100%	Tech.Spec./IS: 398	There shall be smoothness over lapping of strands, chipping of Al etc	QC Record	P		
c)	Joints	Visual	Major	Visual	100%	100%	Tech.Spec./IS: 398	No Joints	QC Record	P		

3.0 ROUTINE TEST

All tests as listed in Acceptance test


4.0 Final Inspection & Testing


Finished Conductor												
Sl. No.	Component & Operations	Characteristics	Class	Type of Check	Quantum of Check	Reference Document	Acceptance Norms	Format of Record	MFOR	Agency	Remarks	
4.1	Lay Ratio	Measurement	Major	Measurement	One Sample from every 10 drums	Tech.Spec./IS: 398	Tech.Spec./IS: 398	QC Record	✓	P	W	
4.2	Aluminium Wire of Finished Conductor											
a)	Diameter	Dimensional Check	Major	Measurement	One Sample from every 10 drums	Tech.Spec./IS: 398	Tech.Spec./IS: 398	QC Record	✓	P	W	
b)	Breaking load/Tensile Test	Mechanical	Major	Measurement	One Sample from every 10 drums	Tech.Spec./IS: 398	Tech.Spec./IS: 398	QC Record	✓	P	W	
c)	Resistance	ELECTRICAL	Major	Measurement	One Sample from every 10 drums	Tech.Spec./IS: 398	Tech.Spec./IS: 398	QC Record	✓	P	W	
d)	Wrapping	Mechanical	Major	Measurement	One Sample from every 10 drums	Tech.Spec./IS: 398	The Wire shall not crack or break	QC Record	✓	P	W	
e)	Surface Finish	Visual	Major	Visual	One Sample from every 10 drums	Tech.Spec./IS: 398	There shall be no spill & splits, slag, inclusion, diemark, scratches, fittings blow holes	QC Record	✓	P	W	Approved GTP/Dwg also is the part of reference doc & acceptance norms
4.3	Galvanised Steel Wire of Finished Conductor											
a)	Diameter	Dimensional Check	Major	Measurement	One Sample from every 10 drums	Tech.Spec./IS: 398	Tech.Spec./IS: 398	QC Record	✓	P	W	
b)	Breaking load/Tensile Test	Mechanical	Major	Measurement	One Sample from every 10 drums	Tech.Spec./IS: 398	Tech.Spec./IS: 398	QC Record	✓	P	W	
c)	Elongation	Measurement	Major	Measurement	One Sample from every 10 drums	Tech.Spec./IS: 398	Tech.Spec./IS: 398	QC Record	✓	P	W	
d)	Torsion Test (Either Test of c or d)	Mechanical	Major	Measurement	One Sample from every 10 drums	Tech.Spec./IS: 398	Tech.Spec./IS: 398	QC Record	✓	P	W	
e)	Wrapping Test	Mechanical	Major	Measurement	One Sample from every 10 drums	Tech.Spec./IS: 398	The Wire shall not break or flake	QC Record	✓	P	W	
f)	Prece Test	Chemical	Major	Measurement	One Sample from every 10 drums	IS 4826/ 2633	IS 4826/ 2633	QC Record	✓	P	W	
g)	Wt Of Zinc Coating	Chemical	Major	Measurement	One Sample from every 10 drums	IS 4826/ 2633	IS 4826/ 2633	QC Record	✓	P	W	
h)	Adhesion Test	Mechanical	Major	Visual	One Sample from every 10 drums	Tech.Spec./IS: 398	No cracking on surface	QC Record	✓	P	W	

LEGEND:
 D: RECORDS IDENTIFIED WITH "TICK" SHALL BE ESSENTIALLY INCLUDED BY CONTRACTOR IN QA DOCUMENTATION
 M: MANUFACTURER/ SUB-CONTRACTOR C: CONTRACTOR/NOMINATED INSPECTION AGENCY N: ENDUSER P: PERFORM W: WITNESS V: VERIFICATION
 CHP: IDENTIFIED IN COLUMN "N" AS "W"

MANUFACTURER/ SUB-SUPPLIER	REVIEWED BY	APPROVED BY	APPROVAL SEAL
MAIN SUPPLIER			

PROJECT :		MANUFACTURING QUALITY PLAN											REMARKS	
PACKAGE :		ITEM : Overhead Conductor												
CONTRACT NO.:		PAGE 4 OF 4												
MAIN SUPPLIER : BHEL														
SL. NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	Quantum of Check	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	AGENCY			REMARKS		
1	2	3	4	5	M	C/N	8	9	M	C	N			
4.4	Length Measurement of finished conductor	Visual	Major	Visual	One Sample from every 10 drums	Tech.Spec./IS: 398	No scale on the surface	QC Record	✓	P	W	Approved CTP/Drig also is the part of reference doc & acceptance norms		
a)	Check for joints, surface finish & length measurement	Visual	Major	Visual	One Sample from every 10 drums	Tech.Spec./IS: 398	No scale on the surface	QC Record	✓	P	W	Approved CTP/Drig also is the part of reference doc & acceptance norms		
4.5	Sealing at both ends by inspection authority													
4.6	Wooden Drum	Measurement	Major	Measurement	-do-	IS-1778	Appd Drig/Tech Spec	QC Record	✓	P	V			
a)	Visual & Dimensional Check	Measurement	Major	Measurement	-do-	IS-1778	Appd Drig/Tech Spec	QC Record	✓	P	V			
5.0 Packing & Dispatch check for identification & packing														
	i) Proper Packing		Major	Visual	100%	As per Approved Technical Specifications	As per Approved Technical Specifications	Visual checking at the premises		P	V	V		
	ii) Mfg. Name		Major	Visual	100%	As per Approved Technical Specifications	As per Approved Technical Specifications	-do-		P	V	V		
	iii) Size & code		Major	Visual	100%	As per Approved Technical Specifications	As per Approved Technical Specifications	-do-		P	V	V		
	iv) Gross Weight		Major	Visual	100%	As per Approved Technical Specifications	As per Approved Technical Specifications	-do-		P	V	V		
	v) Total weight		Major	Visual	100%	As per Approved Technical Specifications	As per Approved Technical Specifications	-do-		P	V	V		
	vi) Net weight		Major	Visual	100%	As per Approved Technical Specifications	As per Approved Technical Specifications	-do-		P	V	V		
	vii) Length of Conductor		Major	Visual	100%	As per Approved Technical Specifications	As per Approved Technical Specifications	-do-		P	V	V		
	viii) Paint Coating		Major	Visual	100%	As per Approved Technical Specifications	As per Approved Technical Specifications	-do-		P	V	V		
LEGEND:													DOC. NO.	
D: RECORDS IDENTIFIED WITH "TICK" SHALL BE ESSENTIALLY INCLUDED BY CONTRACTOR IN QA DOCUMENTATION M: MANUFACTURER/ SUB-CONTRACTOR C: CONTRACTOR/NOMINATED INSPECTION AGENCY N: ENDUSER P: PERFORM. W: WITNESS V: VERIFICATION CHP: IDENTIFIED IN COLUMN "N" AS "W"													REV.	
SIGNATURE													CAT.	
FORMAT NO.: QS-01-QAI-P-09/F1-R1													APPROVED BY	
MANUFACTURER/ SUB-SUPPLIER													APPROVAL SEAL	
													ENGG. DIV./QA & I	

PROJECT :		MANUFACTURING QUALITY PLAN										REMARKS		
PACKAGE :		ITEM : Overhead Conductor												
CONTRACT NO.:		QP NO.: TBQM-STD-CONDUCTOR-2												
MAIN SUPPLIER : BHEL		PAGE 1 OF 4												
NTPC Drg No. :		Quantum of Check												
		M C/N												
		M C N												
		D*												
		9												
		8												
		7												
		6												
		5												
		4												
		3												
		2												
		1												
		1												
		11												
1.0 RAW MATERIAL														
1.1 Aluminium Wire Rod.														
a)	Chem. Composition	Chemical	Major	Measurement	One Sample from 4MT or Part thereof	IS 4026-1976	IS 4026-1976	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	P	V	Supplier TC/Third Party TC	V
b)	Diameter	Dimensional Check	Major	Measurement	One sample from each coil	Tech.Spec./IS :5484	Tech.Spec./IS :5484	Tech.Spec./IS :5484	Tech.Spec./IS :5484	Supplier TC/QC Record	P	V	Supplier TC/QC Record	V
c)	Breaking load/Tensile Test	Mechanical	Major	Measurement	One sample from each coil	Tech.Spec./IS :5484	Tech.Spec./IS :5484	Tech.Spec./IS :5484	Tech.Spec./IS :5484	-do-	P	V	-do-	V
d)	Resistivity/Conductivity	Electrical	Major	Measurement	-do-	Tech.Spec./IS :5484	Tech.Spec./IS :5484	Tech.Spec./IS :5484	Tech.Spec./IS :5484	-do-	P	V	-do-	V
e)	Elongation	Mechanical	Major	Measurement	-do-	Tech.Spec./IS :5484	Tech.Spec./IS :5484	Tech.Spec./IS :5484	Tech.Spec./IS :5484	-do-	P	V	-do-	V
f)	Surface finish & Smoothness	Visual	Minor	Measurement	100% on each coil	Tech.Spec./IS :5484	Tech.Spec./IS :5484	Tech.Spec./IS :5484	Tech.Spec./IS :5484	QC Record	P	V	QC Record	V
1.2 Galvanized Steel Wire														
a)	Chemical analysis	Chemical	Major	Measurement	Three Samples per heat	Tech.Spec./IS :398	Tech.Spec./IS :398	Tech.Spec./IS :398	Tech.Spec./IS :398	Supplier TC	-	V	Supplier TC	V
b)	Dia of individual wire	Dimensional Check	Major	Measurement	One sample from each coil	Tech.Spec./IS :398	Tech.Spec./IS :398	Tech.Spec./IS :398	Tech.Spec./IS :398	Supplier TC/QC Record	P	V	Supplier TC/QC Record	V
c)	Breaking load/Tensile Test	Mechanical	Major	Measurement	-do-	Tech.Spec./IS :398	Tech.Spec./IS :398	Tech.Spec./IS :398	Tech.Spec./IS :398	-do-	P	V	-do-	V
d)	Torsion test	-do-	Major	Measurement	-do-	Tech.Spec./IS :398	Tech.Spec./IS :398	Tech.Spec./IS :398	Tech.Spec./IS :398	-do-	P	V	-do-	V
e)	Elongation test	-do-	Major	Measurement	-do-	Tech.Spec./IS :398	Tech.Spec./IS :398	Tech.Spec./IS :398	Tech.Spec./IS :398	-do-	P	V	-do-	V
LEGEND:														
D: RECORDS IDENTIFIED WITH "TICK" SHALL BE ESSENTIALLY INCLUDED BY CONTRACTOR IN QA DOCUMENTATION M: MANUFACTURER/ SUB-CONTRACTOR C: CONTRACTOR/NOMINATED INSPECTION AGENCY N: NTPC P: PERFORM. W: WITNESS V: VERIFICATION CHIP: NTPC SHALL IDENTIFY IN COLUMN "N" AS "W"														
FOR NTPC USE														
														
SIGNATURE														
REVIEWED BY														
APPROVED BY														
ENGG. DIV./QA & I														

PROJECT :		MANUFACTURING QUALITY PLAN										REMARKS	
PACKAGE :		ITEM : Overhead Conductor											
CONTRACT NO.:		PAGE 2 OF 4											
MAIN SUPPLIER : BHEL													
NTPC Drg No. :													
SL. NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	Quantum of Check	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	AGENCY			REMARKS	
					M	C/N			M	C	N		
1		3	4	5	6	7	8	9	** 10			11	
f)	Wrapping test	-do-	Major	Measurement	-do-	Tech.Spec./IS: 398	Tech.Spec./IS: 398	-do-	P	V	V	V	
g)	Preece Test	Chemical	Major	Measurement	-do-	IS 4826/IS 2633	IS 4826/IS 2634	-do-	P	V	V	V	
h)	Wt. of Zinc Coating	Chemical	Major	Measurement	-do-	IS 4826/IS 2633 & GTP	IS 4826/IS 2633 & GTP	-do-	P	V	V	V	
2.0 IN PROCESS INSPECTION													
2.1	Aluminium drawn wire												
a)	Surface finish	Visual	Major	Measurement	100% of each spool	Tech.Spec./IS: 398	The Wire shall be smooth & free from all imperfections such as spikes spites scale inclusions, die marks, scratches, fillings;	QC Record	P				
b)	Dia of wire	Dimentional Check	Major	Measurement	One sample from each spool	Tech.Spec./IS: 398	Tech.Spec./IS: 398	-do-	P				
c)	Breaking load/tensile Test	Mechanical	Major	Measurement	-do-	Tech.Spec./IS: 398	Tech.Spec./IS: 398	-do-	P				
d)	Resistance Measurement.	Electrical	Major	Measurement	-do-	Tech.Spec./IS: 398	Tech.Spec./IS: 398	-do-	P				
e)	Wrapping Test	Mechanical	Major	Measurement	-do-	Tech.Spec./IS: 398	Wire shall not crack or break	-do-	P				
f)	Joints	Visual	Major	Visual	100%	Tech.Spec./IS: 398	No Joints	QC Record	P				
2.2	Steel Stranding												
a)	Lay ratio/ direction & compactness	Mechanical	Major	Measurement	One sample from each load	Tech.Spec./IS: 398	Tech.Spec./IS: 398	QC Record	P				
b)	Joints	Visual	Major	Visual	100%	Tech.Spec./IS: 398	No Joints	QC Record	P				
2.3	Conductor Stranding												
a)	Lay ratio/ direction & compactness	Visual	Major	Visual	100%	Tech.Spec./IS: 398	No Joints	QC Record	P				
a1)	Inner Aluminium Layer	Mechanical	Major	Measurement	One sample from each load	Tech.Spec./IS: 398	Tech.Spec./IS: 398	QC Record	P				
a2)	Outer Aluminium Layer	Mechanical	Major	Measurement	-do-	Tech.Spec./IS: 398	Tech.Spec./IS: 398	QC Record	P				
LEGEND: D: RECORDS IDENTIFIED WITH "TICK" SHALL BE ESSENTIALLY INCLUDED BY CONTRACTOR IN QA DOCUMENTATION M: MANUFACTURER/ SUB-CONTRACTOR C: CONTRACTOR/NOMINATED INSPECTION AGENCY N: NTPC P: PERFORM. W: WITNESS, V: VERIFICATION CHP: NTPC SHALL IDENTIFY IN COLUMN "N" AS "W"													
MANUFACTURER/ SUB-SUPPLIER		SIGNATURE		MAIN SUPPLIER		REVIEWED BY		APPROVED BY		APPROVAL SEAL			
DOC. NO. REV..... CAT..... FOR NTPC USE 													
FORMAT NO.: QS-01-QAI-P-09/FI-RI ENGG. DIV./QA & I													

PROJECT : NORTH KARANPURA STPP PACKAGE : 400KV SWITCHYARD CONTRACT NO.: CS-4410-001-2 MAIN SUPPLIER : BHEL NTPC Drg No. : 4410-001-572-QVE-Q-1274		MANUFACTURING QUALITY PLAN					AGENCY					REMARKS	
ITEM : Overhead Conductor		REFERENCE DOCUMENT					RECORD						
SL. NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	Quantum of Check	DOCUMENT	NORMS	ACCEPTANCE	FORMAT OF RECORD	M	C	N	REMARKS
1	2	3	4	5	M C/N	7	8	9	D*	**	10	11	
b)	Smoothness/Surface Scratches	Visual	Major	Visual	100%	Tech.Spec./IS: 398	There shall be smoothness over lapping of strands, chipping of Al etc		QC Record				
c)	Joints	Visual	Major	Visual	100%	Tech.Spec./IS: 398	No Joints		QC Record				
3.0 ROUTINE TEST													
All tests as listed in Acceptance test													
4.0 Final Inspection & Testing (REVIEW OF TYPE TEST CLEARANCE FROM NTPC ENGINEERING)													
4.1 Finished Conductor													
a)	Lay Ratio	Measurement	Major	Measurement	One Sample from every 10 drums	Tech.Spec./IS: 398	Tech.Spec./IS: 398		QC Record	✓			W
4.2 Aluminium Wire of Finished Conductor													
a)	Diameter	Dimensional Check	Major	Measurement	One Sample from every 10 drums	Tech.Spec./IS: 398	Tech.Spec./IS: 398		QC Record	✓			W
b)	Breaking load/Tensile Test	Mechanical	Major	Measurement	One Sample from every 10 drums	Tech.Spec./IS: 398	Tech.Spec./IS: 398		QC Record	✓			W
c)	Resistance	ELECTRICAL	Major	Measurement	One Sample from every 10 drums	Tech.Spec./IS: 398	The Wire shall not crack or break		QC Record	✓			W
d)	Wrapping	Mechanical	Major	Measurement	One Sample from every 10 drums	Tech.Spec./IS: 398	& splits, slag, inclusion, diemark, scratches, fittings blow holes		QC Record	✓			W
e)	Surface Finish	Visual	Major	Visual	One Sample from every 10 drums	Tech.Spec./IS: 398			QC Record	✓			W
4.3 Galvanised Steel Wire of Finished Conductor													
a)	Diameter	Dimensional Check	Major	Measurement	One Sample from every 10 drums	Tech.Spec./IS: 398	Tech.Spec./IS: 398		QC Record	✓			W
b)	Breaking load/Tensile Test	Mechanical	Major	Measurement	One Sample from every 10 drums	Tech.Spec./IS: 398	Tech.Spec./IS: 398		QC Record	✓			W
c)	Elongation	Measurement	Major	Measurement	One Sample from every 10 drums	Tech.Spec./IS: 398	Tech.Spec./IS: 398		QC Record	✓			W
d)	Torsion Test (Either Test of c or d)	Mechanical	Major	Measurement	One Sample from every 10 drums	Tech.Spec./IS: 398	The Wire shall not break or flake		QC Record	✓			W
e)	Wrapping Test	Mechanical	Major	Measurement	One Sample from every 10 drums	Tech.Spec./IS: 398	IS 4826/ 2633		QC Record	✓			W
f)	Prece Test	Chemical	Major	Measurement	One Sample from every 10 drums	Tech.Spec./IS: 398	IS 4826/ 2633		QC Record	✓			W
g)	Wt Of Zinc Coating	Chemical	Major	Measurement	One Sample from every 10 drums	Tech.Spec./IS: 398	No cracking on surface		QC Record	✓			W
h)	Adhesion Test	Mechanical	Major	Visual	One Sample from every 10 drums	Tech.Spec./IS: 398			QC Record	✓			W
LEGEND:													
D: RECORDS IDENTIFIED WITH "TICK" SHALL BE ESSENTIALLY INCLUDED BY CONTRACTOR IN QA DOCUMENTATION M: MANUFACTURER/ SUB-CONTRACTOR C: CONTRACTOR/NOMINATED INSPECTION AGENCY N: NTPC P: PERFORM. W: WITNESS, V: VERIFICATION CHP: NTPC SHALL IDENTIFY IN COLUMN "N" AS "W"													
MANUFACTURER/ SUB-SUPPLIER		MAIN SUPPLIER		SIGNATURE		FORMAT NO.:QS-01-QAI-P-09/F1-R1		REVIEWED BY		APPROVED BY		APPROVAL SEAL	



ENGG. DIV./QA & I

982097/2022/BB/0B HVDC

PROJECT :		MANUFACTURING QUALITY PLAN										REMARKS	
PACKAGE :		ITEM : Overhead Conductor											
CONTRACT NO.:		PAGE 4 OF 4											
MAIN SUPPLIER : BHEL													
NTPC Drg No. :													
SL. NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTITY OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	AGENCY			REMARKS	
1		3	4	5	M C/N	7	8	9	M	C	N		
4.4	Length Measurement of finished conductor	Visual	Major	Visual	One Sample from every 10 drums	Tech.Spec./IS: 398	No scale on the surface	QC Record ✓	P	W	W		
a)	Check for joints, surface finish & length measurement				One Sample from every 10 drums								
4.5	Sealing at both ends by inspection authority												
4.6	Wooden Drum												
a)	Visual & Dimensional Check	Measurement	Major	Measurement	-do-	IS-1778	Appd Drg/Tech Spec	QC Record ✓	P	V	V		
5.0 Packing & Dispatch check for identification & packing													
		i) Proper Packing	Major	Visual	100%	As per Approved Technical Specifications	As per Approved Technical Specifications	Visual checking at the premises	P	V	V		
		ii) Mfg. Name	Major	Visual	100%	As per Approved Technical Specifications	As per Approved Technical Specifications	-do-	P	V	V		
		iii) Size & code	Major	Visual	100%	As per Approved Technical Specifications	As per Approved Technical Specifications	-do-	P	V	V		
		iv) Gross Weight	Major	Visual	100%	As per Approved Technical Specifications	As per Approved Technical Specifications	-do-	P	V	V		
		v) Total weight	Major	Visual	100%	As per Approved Technical Specifications	As per Approved Technical Specifications	-do-	P	V	V		
		vi) Net weight	Major	Visual	100%	As per Approved Technical Specifications	As per Approved Technical Specifications	-do-	P	V	V		
		vii) Length of Conductor	Major	Visual	100%	As per Approved Technical Specifications	As per Approved Technical Specifications	-do-	P	V	V		
		viii) Paint Coating	Major	Visual	100%	As per Approved Technical Specifications	As per Approved Technical Specifications	-do-	P	V	V		
		LEGEND:											
		D: RECORDS IDENTIFIED WITH "TICK" SHALL BE ESSENTIALLY INCLUDED BY CONTRACTOR IN QA DOCUMENTATION M: MANUFACTURER/ SUB-CONTRACTOR C: CONTRACTOR/NOMINATED INSPECTION AGENCY N: NTPC P: PERFORM. W: WITNESS. V: VERIFICATION CHP: NTPC SHALL IDENTIFY IN COLUMN "N" AS "W"											
SIGNATURE		FOR NTPC USE											
MANUFACTURER/ SUB-SUPPLIER		REV. CAT.											
		DOC. NO.											
		REVIEWED BY											
		APPROVED BY											
		APPROVAL SEAL											
		ENGG. DIV./QA & I											



Section 2: Detailed Technical Requirements for Material under Scope of Supplies

1.0 SCOPE

This section covers the standard technical requirements of the ACSR Moose/ ACSR Bersimis/ ACSR Zebra/ AAC Bull Conductor.

2.0 TECHNICAL REQUIREMENTS

- (1) Conductor type: ACSR (Moose/ Bersimis/ Zebra)
- (2) Conductor type: AAC (Bull)

The specific technical details of the conductor are as tabulated,

2.1 Conductor type: ACSR (Moose/ Bersimis/ Zebra)

Sl. No.	Description	ACSR Moose	ACSR Bersimis	ACSR Zebra
1.0	Applicable Standard	IS: 398/ IEC: 1089	IS: 398/ IEC: 1089	IS: 398/ IEC: 1089
2.0	Raw Materials			
2.1	Aluminium			
a)	Minimum purity of Aluminium	99.50%	99.50%	99.50%
b)	Maximum copper content	0.04%	0.04%	0.04%
2.2	Steel wires/ rods			
a)	Carbon	0.50% to 0.85%	0.50% to 0.85%	0.50% to 0.85%
b)	Manganese	0.50% to 1.10%	0.50% to 1.10%	0.50% to 1.10%
c)	Phosphorous	Not more than 0.035%	Not more than 0.035%	Not more than 0.035%
d)	Sulphur	Not more than 0.045%	Not more than 0.045%	Not more than 0.045%
e)	Silicon	0.10% to 0.35% (Max.)	0.10% to 0.35% (Max.)	0.10% to 0.35% (Max.)
2.3	Zinc			
a)	Minimum purity of Zinc	99.95%	99.95%	99.95%
3.0	Aluminium strands after stranding			
3.1	Diameter			
a)	Nominal	3.53 mm	4.57 mm	3.18 mm
b)	Maximum	3.55 mm	4.61 mm	3.21 mm
c)	Minimum	3.51 mm	4.53 mm	3.15 mm
3.2	Minimum breaking load of strand			
a)	Before stranding	1.57 KN	2.64 KN	1.29 KN
b)	After stranding	1.49 KN	2.51 KN	1.23 KN
c)	Maximum D.C. resistance of strand at 20 deg. Centigrade	2.921 Ohm/Km	1.738 Ohm/Km	--
3.3	Maximum resistance of 1 m length of strand at 20 deg. C	0.002921 Ohm	0.001738 Ohm	0.003626 Ohm
4.0	Steel strand after stranding			
4.1	Diameter			
a)	Nominal	3.53 mm	2.54 mm	3.18 mm
b)	Maximum	3.60 mm	2.57 mm	3.24 mm
c)	minimum	3.46 mm	2.51 mm	3.12 mm
4.2	Minimum breaking load of strand			
a)	Before stranding	12.86 KN	6.87 KN	10.43 KN
b)	After stranding	12.22 KN	6.53 KN	9.91 KN
4.3	Galvanising			
a)	Minimum weight of zinc coating per sq.m.	260 gm	260 gm	260 gm
b)	Minimum number of dips that the galvanised strand can withstand in the standard preece test	2 dips of one minute & 1dip of half minute	2 dips of one minute & 1dip of half minute	2 dips of one minute & 1dip of half minute
c)	Min. No. of twists in	16 (After stranding)	16 (After stranding)	16 (After stranding)

Standard Technical Specification for ACSR Moose, ACSR Bersimis, ACSR Zebra & AAC Bull Conductor

	guage length equal 100 times the dia. of wire which the strand can withstand in the torsion test (after stranding)	18 (Before stranding)	18 (Before stranding)	18 (Before stranding)
5.0	ACSR Conductor			
5.1	Stranding			
a)	Stranding details	Al -54/3.53 mm+ Steel-7/3.53 mm	Al -42/4.57 mm+ Steel-7/2.54 mm	Al -54/3.18 mm+ Steel-7/3.18 mm
b)	Number of strands			
i)	Steel centre	1 Nos.	1 Nos.	1 Nos.
ii)	1st Steel Layer	6 Nos.	6 Nos.	6 Nos.
iii)	1st Aluminium Layer	12 Nos.	8 Nos.	12 Nos.
iv)	2nd Aluminium Layer	18 Nos.	14 Nos.	18 Nos.
v)	3rd Aluminium Layer	24 Nos.	20 Nos.	24 Nos.
5.2	Sectional Area of aluminium	528.50 Sq.mm	689.50 Sq.mm	428.9 Sq.mm
5.3	Total sectional area	597.00 Sq.mm	725.00 Sq.mm	484.5 Sq.mm
5.4	Approximate Weight	2.004 Kg/m	2.181 Kg/m	1.621 Kg/m
5.5	Diameter of the conductor	31.77 mm	35.05 mm	28.62 mm
5.6	UTS of the conductor	161.20 (Min)	154 (Min)	130.32 (Min)
5.7	Lay ratio of the conductor	Max Min	Max Min	Max Min
a)	Outer Steel layer	18 16	24 16	28 13
b)	8/12 wire Aluminium layer	14 12	17 12	17 10
c)	14/ 18 wire Aluminium layer	13 11	16 11	16 10
d)	20/24 wire Aluminium layer	12 10	13 10	14 10
5.8	DC resistance of the conductor at 20°C	0.05552 Ohm/Km	0.04242 Ohm/Km	0.06868 Ohm/Km
5.9	Standard length of the Conductor per drum*	1800 m	1800 m	1800 m
5.10	Tolerance on Standard length	(±)5%	(±)5	(±)5
5.11	Direction of lay of outer layer	Right Hand	Right Hand	Right Hand
5.12	Linear mass of the conductor			
a)	Standard	2004 Kg/Km	2181 Kg/Km	1621 Kg/Km
b)	Minimum	1965 Kg/Km	2142 Kg/Km	1589 Kg/Km
c)	Maximum	2045 Kg/Km	2221 Kg/Km	1653 Kg/Km
5.13	Modulus of Elasticity (Final State)	6860 Kg/Sq.mm	--	--
5.14	Co-efficient of Linear Expansion	19.3x10-6 Per Deg. C	21.5x10-6 Per Deg. C	19.3x10-6 Per Deg. C
5.15	Minimum Corona Extinction Voltage	320 KVrms	320 KVrms	154 KVrms
5.16	RIV at 1 Mhz under dry condition	Max. 1000 Microvolts at 320 KVrms	Max. 1000 at 320 KVrms	Max. 1000 at 154 KVrms
6.0	Drum Dimensions			
6.1	Applicable Standard	Generally confirms to IS: 1778	Generally confirms to IS: 1778	Generally confirms to IS: 1778
6.2	Drum Dimensions			
a)	Flange Diameter	1800 mm	1800 mm	1850
b)	Traverse width	950 mm	950 mm	925
c)	Barrel Diameter	650 mm	650 mm	650
d)	Flange thickness	50x50 mm	50x50 mm	50x50

* Balance length <1800 m should be supplied on one drum.

Standard Technical Specification for ACSR Moose, ACSR Bersimis, ACSR Zebra & AAC Bull
Conductor

2.2 Conductor type: AAC (Bull)

Sl. No.	Description	AAC Bull		
1.0	Applicable Standard	IS: 398		
2.0	Raw Materials			
2.1	Steel wire/ rods			
2.1.1	Aluminium			
a)	Minimum purity of Aluminium	99.50%		
b)	Maximum copper content	0.04%		
3.0	Aluminium strands after stranding			
3.1	Diameter			
a)	Nominal	4.25 mm		
b)	Maximum	4.29 mm		
c)	Minimum	4.21 mm		
3.2	Minimum breaking load of strand			
a)	Before stranding	2.23 KN		
b)	After stranding	2.12 KN		
c)	Maximum D.C. resistance of strand at 20 deg. Centigrade	3.651 Ohm/Km		
3.3	Maximum resistance of 1 m length of strand at 20 deg. C	0.00203 Ohm		
4.0	AAC Conductor			
4.1	Stranding			
a)	Stranding details	Al -61/4.25 mm		
b)	Number of strands			
i)	1st Aluminium Layer	1 Nos.		
ii)	2nd Aluminium Layer	6 Nos.		
iii)	3rd Aluminium Layer	12 Nos.		
iv)	4th Aluminium Layer	18 Nos.		
v)	5th Aluminium Layer	24 Nos.		
4.2	Sectional Area of aluminium	865.36 Sq.mm		
4.3	Total sectional area	865.36 Sq.mm		
4.4	Approximate Weight	2.4 Kg/m		
4.5	Diameter of the conductor	38.25 mm		
4.6	UTS of the conductor	139 (Min)		
4.7	Lay ratio of the conductor	Max	Min	
a)	6 wire Aluminium layer	16	10	
b)	12 wire Aluminium layer	16	10	
c)	18 wire Aluminium layer	16	10	
d)	24 wire Aluminium layer	14	10	
4.8	DC resistance of the conductor at 20°C	0.03340 Ohm/Km		
4.9	Standard length of the Conductor per drum*	1000 m		
4.10	Tolerance on Standard length	(±)5%		
4.11	Direction of lay of outer layer	Right Hand		
4.12	Linear mass of the conductor			
a)	Standard	2400 Kg/Km		
b)	Minimum	2355 Kg/Km		
c)	Maximum	2445 Kg/Km		
4.13	Modulus of Elasticity	4709 Kg/Sq.mm (Initial)		

Standard Technical Specification for ACSR Moose, ACSR Bersimis, ACSR Zebra & AAC Bull Conductor

		5869 (Final)		
4.14	Co-efficient of Linear Expansion	23.0x10 ⁻⁶ Per Deg. C		
4.15	Minimum Corona Extinction Voltage	508 KVrms		
4.16	RIV at 1 Mhz	Less than 1000 Microvolts at 508 KVrms		
5.0	Drum Dimensions			
6.1	Applicable Standard	Generally confirms to IS: 1778		
6.2	Drum Dimensions			
a)	Flange Diameter	1855 mm		
b)	Traverse width	925 mm		
c)	Barrel Diameter	850 mm		
d)	Flange thickness	50x50 mm		

* Balance length <1000 m should be supplied on one drum.

3.0 APPLICABLE STANDARDS

The ACSR Moose/ ACSR Bersimis/ ACSR Zebra/ AAC Bull Conductor shall strictly conform to the following Indian and International standards, as appropriate,

IS: 398 (Part-I)	Aluminium conductors for overhead transmission purposes
IEC: 61089/IS 398 (Part-V)	Aluminium conductors galvanized Steel reinforced
IS 2629:1990	Recommended practice for hot dip galvanizing on iron and steel.
IS 4826:1992	Hot dip galvanized coatings on round steel wires
IS 2633:1992	Method for testing uniformity of coating of zinc--coated articles.
IS 6745: 1990	Methods for determination of mass of Zinc coating on zinc coated iron and steel articles
IS 8263:1990	Methods for radio interference test
IS 1778:1980	Reels and drums for bare conductors
IS 1521:1991	Method for tensile testing of steel wire

4.0 TECHNICAL REQUIREMENT AND CONSTRUCTIONAL DETAILS

- 4.1 The finished conductor shall be smooth, compact, uniform and free from all imperfections including kinks (protrusion of wires), wire cross over, over riding, looseness (wire being dislocated by finger/hand pressure and/or unusual bangle noise on tapping), material inclusions, white rust, powder formation or black spot (on account of reaction with trapped rain water etc.), dirt, grit etc.
- 4.2 All the Aluminium and steel strands shall be smooth, uniform and free from all imperfections, such as spills and splits, die marks, scratches, abrasions, etc., after drawing.
- 4.3 The steel strands shall be hot dip galvanised and shall have a minimum zinc coating as indicated in the guaranteed technical particulars. The zinc coating shall be smooth, continuous and of uniform thickness, free from imperfections and shall withstand minimum three dips in standard Preece test. The steel wire rods shall be of such quality and purity that, when drawn to the size of the strands specified and coated with zinc, the finished strands and the individual wires shall be of uniform quality and have the same properties and characteristics as prescribed in IEC: 888.
- 4.4 The steel strands shall be pre-formed and post-formed in order to prevent spreading of strands in the event of cutting of composite core wire. Care shall be taken to avoid damage to galvanization during pre-forming and post-forming operation.

5.0 JOINTS IN WIRE

Standard Technical Specification for ACSR Moose, ACSR Bersimis, ACSR Zebra & AAC Bull Conductor

5.1 Aluminium wires

No joints shall be permitted in the individual wires in the outermost layer of the finished conductor. However, joints in the 12 wire and 18 wire inner layers of the conductor shall be allowed but these joints shall be made by cold pressure butt welding and shall be such that no such joints are within 15 metres of each other in other in the complete stranded conductor.

5.2 Steel wires

There shall be no joint of any kind in the finished wire entering into the manufacture of the strand. There shall also be no strand splices in any length of the completed stranded steel core of the conductor.

6.0 TOLERANCES

The manufacturing tolerances to the extent indicated in the guaranteed technical particulars shall be permitted in the diameter of individual aluminium and steel strands and lay-ratio of the conductor.

7.0 MATERIALS**7.1 Aluminium**

The aluminium strands shall be hard drawn from electrolytic aluminium rods having purity not less than 99.5% and a copper content not exceeding 0.04%. They shall have the same properties and characteristics as prescribed in IEC:889.

7.2 Steel

The steel wire strands shall be drawn from high carbon steel wire rods produced by either the acid or the basic open-hearth process, the electric furnace process, or the basic oxygen process and shall conform to the chemical composition indicated in the guaranteed technical particulars.

7.3 Zinc

The zinc used for galvanizing shall be electrolytic high grade zinc of 99.95% purity. It shall conform to and satisfy all the requirements of IS: 209-1979.

8.0 STANDARD LENGTH

The conductor shall be supplied as required. No joint shall be allowed within a single span of stringing, jumpers and equipment interconnection.

9.0 TESTS

The conductor should have type tested as per IEC/IS and shall be subjected to routine and acceptance tests in accordance with applicable IS specifications/ISO/ASTMA recommendations.

Any test (s) as per BHEL/customer technical specification requirement is to be repeated due to change in procedure/ change in reference standard shall be done by bidder without any cost implications for the same.

9.1 Type tests: The following type tests shall be conducted on the conductor, if the valid type tests are not available with bidder:

a)	UTS test	As per clause No. 10.1 below (The number of samples shall be mutually agreed)
b)	Corona extinction voltage test (dry)	As per clause No. 10.2 below
c)	Radio interference voltage test (dry)	As per clause No. 10.3 below
d)	DC resistance test	As per clause No. 10.4 below

Standard Technical Specification for ACSR Moose, ACSR Bersimis, ACSR Zebra & AAC Bull Conductor

9.2 Acceptance tests: Tests to be conducted

a)	Visual check for joints, scratches, etc. and lengths of conductor	As per clause No. 10.7 below
b)	Dimensional check on strands	As per clause No. 10.8 below
c)	Check for lay ratio of various layers	As per clause No. 10.9 below
d)	Galvanizing test on steel strands	As per clause No. 10.10 below
e)	Torsion and elongation test on steel strands	As per clause No. 10.11 below
f)	Procedure Qualification test on welded Aluminium strands	As per clause No. 10.12 below

In addition to above, wrap test on steel and aluminium strands, dc resistance test on aluminium strands and UTS test on welded joint of aluminium strands shall be carried out as per clauses 13.7, 13.8 & 13.5.2 respectively of IS:398 (part-V)1992.

NOTE: All the above tests except test mentioned at (a) shall be carried out on aluminium and steel strands after stranding only.

9.3 Routine tests: Tests to be conducted

- Check to ensure that the joints are as per specification.
- Check that there are no cuts, fins etc. on the strands
- All acceptance test as mentioned in clause 9.2 above to be carried out as per approved Quality plan.

9.4 Tests during manufacture

a)	Chemical analysis of zinc used for galvanizing	As per clause No. 10.5
b)	Chemical analysis of aluminium used for making aluminium stands	As per clause No. 10.6
c)	Chemical analysis of steel used for making steel strands	As per clause No. 10.6

9.5 Sample batch for type testing

The contractor shall offer material for selection of samples for type testing, only after getting quality assurance plans approved from owner's quality assurance department. The sample shall be manufactured strictly in accordance with the quality assurance plan approved by owner.

10.0 TESTING PROCEDURE**10.1 UTS Test on Stranded Conductor**

Circles perpendicular to the axis of the conductor shall be marked at two places on a sample of conductor of minimum 5m length suitably compressed with dead end clamps at either end. The load shall be increased, at steady rate up to 50% of minimum specified UTS and held for one minute. The circles drawn shall not be distorted due to Relative movement of strands. Thereafter the load shall be increased at a steady rate to 100% of minimum specified UTS and held for one minute. The conductor sample shall not fail during this period. The applied load shall then be increased until the failing load is reached and the value recorded.

10.2 Corona Extinction Voltage Test

Two samples of conductor of 5m length shall be strung with a spacing of 450 mm between them at a height not exceeding 8.0 m above ground. This assembly shall be tested as per Annexure-A, Corona

Standard Technical Specification for ACSR Moose, ACSR Bersimis, ACSR Zebra & AAC Bull Conductor

extinction voltage shall not be less than 510 kV (rms) & 320 KV (RMS) Line to ground for 765 kV & 400 kV respectively.

10.3 Radio Interference Voltage Test

Under the conditions as specified under (10.2) above, the conductor samples shall have radio interference voltage as indicated in the guaranteed technical particulars enclosed with. This test may be carried out with corona control rings and arcing horns. The test procedure shall be as per Annexure-A.

10.4 D.C Resistance Test on Stranded Conductor

On a conductor sample of minimum 5 m length two contact clamps shall be fixed with a pre-determined bolt torque. The resistance shall be measured by a Kelvin double bridge by placing the clamps initially zero metre and subsequently one metre apart. The test shall be repeated at least five times and the average value recorded. The value obtained shall be corrected to the value at 20°C as per clause no. 13.8 of IS:398 (Part-V)-1992. The resistance corrected at 20°C shall conform to the requirements of this specification.

10.5 Chemical Analysis of Zinc

Samples taken from the zinc ingots shall be chemically/spectrographically analysed. The same shall be in conformity to the requirements stated in this specification.

10.6 Chemical Analysis of Aluminium and Steel

Samples taken from the Aluminium ingots/ coils/ strands shall be chemically/ spectrographically analysed. The same shall be in conformity to the requirements in this specification.

10.7 Visual Check for Joints, Scratches etc.

Conductor drums shall be rewound in the presence of the inspector. The inspector shall visually check for scratches, joints, etc. and that the conductor generally conforms to the requirements of this specification. The length of conductor wound on the drum shall be measured with the help of counter meter during rewinding.

10.8 Dimensional Check for steel and Aluminium Strands.

The individual strands shall be dimensionally checked to ensure that they conform to the requirements of this specification.

10.9 Check for Lay –ratios of various Layers.

The lay-ratios of various layers shall be checked to ensure that they conform to the requirements of this specification.

10.10 Galvanising Test

The test procedure shall be as specified in IEC:60888. The material shall conform to the requirements of this Specification. The adherence of zinc shall be checked by wrapping around a mandrel four times the diameter of steel wire.

10.11 Torsion and Elongation Tests on Steel Strands

The test procedures shall be as per clause No. 10.3 of IEC:60888. In torsion test, the number of complete twists before fracture shall not be less than that indicated in the GTP. In case test sample length is less or more than 100 times the stranded diameter of the strand, the minimum number of twists will be proportioned to the length and if number comes in the fraction then it will be rounded off to next higher whole number. In elongation test, the elongation of the strand shall not be less than 4% for a gauge length of 250 mm.

10.12 Procedure Qualification test on welded Aluminium strands

Two Aluminium wires shall be welded as per the approved quality plan and shall be subjected to tensile load. The breaking strength of the welded joint of the wire shall not be less than the breaking strength of individual strands.

Annexure-A

CORONA AND RADIO INTERFERENCE VOLTAGE (RIV) TEST**1. General**

Unless otherwise stipulated, all equipment together with its associated connectors, where applicable, shall be tested for external corona both by observing the voltage level for the extinction of visible corona under falling power frequency voltage and by measurement of radio interference voltage (RIV).

2. Test Levels:

The test voltage levels for measurement of external RIV and for corona extinction voltage are listed under the relevant clauses of the specification.

3. Test Methods for RIV:

3.1 RIV tests shall be made according to measuring circuit as per International Special-Committee on Radio Interference (CISPR) Publication 16-1(1993) Part -1. The measuring circuit shall preferably be tuned to frequency with 10% of 0.5 Mhz but other frequencies in the range of 0.5 MHz to 2 MHz may be used, the measuring frequency being recorded. The results shall be in microvolts.

3.2 Alternatively, RIV tests shall be in accordance with NEMA standard Publication No. 107-1964, except otherwise noted herein.

3.3 In measurement of, RIV, temporary additional external corona shielding may be provided. In measurements of RIV only standard fittings of identical type supplied with the equipment and a simulation of the connections as used in the actual installation will be permitted in the vicinity within 3.5 meters of terminals.

3.4 Ambient noise shall be measured before and after each series of tests to ensure that there is no variation in ambient noise level. If variation is present, the lowest ambient noise level will form basis for the measurements. RIV levels shall be measured at increasing and decreasing voltages of 85%, 100%, 115% and 130% of the specified RIV test voltage for all equipment unless otherwise specified. The specified RIV test voltage for 765kV, 400kV, 220kV is listed in the detailed specification together with maximum permissible RIV level in microvolts.

3.5 The metering instruments shall be as per CISPR recommendation or equivalent device so long as it has been used by other testing authorities.

3.6 The RIV measurement may be made with a noise meter. A calibration procedure of the frequency to which noise meter shall be tuned shall establish the ratio of voltage at the high voltage terminal to voltage read by noise meter.

4. Test Methods for Visible Corona [applicable for 400kV and above]

The purpose of this test is to determine the corona extinction voltage of apparatus, connectors etc. The test shall be carried out in the same manner as RIV test described above with the exception that RIV measurements are not required during test and a search technique shall be

used near the onset and extinction voltage, when the test voltage is raised and lowered to determine their precise values. The test voltage shall be raised to 130% of RIV test voltage and maintained there for five minutes. In case corona inception does not take place at 130%, test shall be stopped, otherwise test shall be continued and the voltage will then be decreased slowly until all visible corona disappears. The procedure shall be repeated at least 4 times with corona inception and extinction voltage recorded each time. The corona extinction voltage for purposes of determining compliance with the specification shall be the lowest of the four values at which visible corona (negative or positive polarity) disappears. Photographs with laboratory in complete darkness shall be taken under test conditions, at all voltage steps i.e. 85%, 100%, 115% and 130%. Additional photographs shall be taken at corona inception and extinction voltages. At least two views shall be photographed in each case using Panchromatic film with an ASA daylight rating of 400 with an exposure of two minutes at a lens aperture of f/5.6 or equivalent. The photographic process shall be such that prints are available for inspection and comparison with conditions as determined from direct observation. Photographs shall be taken from above and below the level of connector so as to show corona on bushing, insulators and all parts of energised connectors. The photographs shall be framed such that test object essentially, fills the frame with no cut-off. In case corona inception does not take place at 130%, voltage shall not be increased further and corona extinction voltage shall be considered adequate.

4.1 The test shall be recorded on each photograph. Additional photograph shall be taken from each camera position with lights on to show the relative position of test object to facilitate precise corona location from the photographic evidence.

4.2 In addition to photographs of the test object preferably four photographs shall be taken of the complete test assembly showing relative positions of all the test equipment and test objects. These four photographs shall be taken from four points equally spaced around the test arrangement to show its features from all sides.

Drawings of the laboratory and test set up locations shall be provided to indicate camera positions and angles. The precise location of camera shall be approved by Purchaser's inspector, after determining the best camera locations by trial energisation of test object at a voltage which results in corona.

4.3 The test to determine the visible corona extinction voltage need not be carried out simultaneously with test to determine RIV levels.

4.4 However, both test shall be carried out with the same test set up and as little time duration between tests as possible. No modification on treatment of the sample between tests will be allowed. Simultaneous RIV and visible corona extinction voltage testing may be permitted at the discretion of Purchaser's inspector if, in his opinion, it will not prejudice other test.

5. Test Records:

In addition to the information previously mentioned and the requirements specified as per CISPR or NEMA 107-1964 the following data shall be included in test report:

- a) Background noise before and after test.
- b) Detailed procedure of application of test voltage.
- c) Measurements of RIV levels expressed in micro volts at each level.

- d) Results and observations with regard to location and type of interference sources detected at each step.
- e) Test voltage shall be recorded when measured RIV passes through 100 microvolts in each direction.
- f) Onset and extinction of visual corona for each of the four tests required shall be recorded.