

REF.ENQUIRY NO.77/25/6326/LOK  
Dated 16.03.26

Due Date & Time **26.03.26**  
By **03:00 PM**

### NIT TERMS & CONDITIONS

Dear Sir/ Ma'am

**Subject: Open tender Enquiry for "LT PVC Control Cable" for 2 X 800 MW NTPC LARA STPS STAGE-II project**

BHEL invites your offers for **LT PVC Control Cable** for scope as described in the various sections of the technical specification for **2 X 800 MW NTPC LARA STPS STAGE-II project**.

Your best quotation/offer shall be submitted in two parts strictly as per Clause-2.0 of "**Instructions to Bidders**" GCC Rev. 07 & its Corrigenda, in line with our terms and conditions, online via e-procurement system (**NIC portal**) for the below mentioned equipment/system.

Sl. No.	PROJECT	ITEM DESCRIPTION	TECHNICAL SPECIFICATION
1	2 X 800 MW NTPC LARA STPS STAGE-II	LT PVC Control Cable	PE-TS-508-507-E003, REV NO. 0

It shall be the responsibility of the bidder to ensure that the tender is submitted **on or before the due date by 03:00 PM**. Part-I (techno-commercial) bids shall be opened **at 04:00 PM on the due date**.

Note: 1. Detailed Tender documents / Corrigenda, addenda, amendments, time extensions, clarifications etc. can be downloaded / accessed from the following website: [-https://eprocurebhel.co.in](https://eprocurebhel.co.in)

2. Bidders are requested to upload their best offer on <https://eprocurebhel.co.in> only. In case bidders are not interested to quote, please send us the regret by e-mail or letter.

### **ENQUIRY TERMS AND CONDITIONS:**

- Offers should be submitted/uploaded separately in two parts **online through e-procurement system** as follows:

**Part-I: TECHNO-COMMERCIAL BID**

**Part-II: PRICE BID**

For detailed instructions, please refer GCC Rev 07- Instructions to Bidders & Corrigenda to GCC Rev. 07.

- Bidders shall submit their offers meeting the requirements of the following tender documents indicated in BHEL PEM GCC Rev- 07, Corrigenda to GCC Rev. 07 and other Terms and Conditions included in this Enquiry Letter. **Bidders may download the GCC Rev 07 (with all Corrigenda) from the BHEL PEM website as per below weblinks and go through the same before quoting: -**

<https://pem.bhel.com/Documents/GCC/GCCRev07.pdf>

[https://pem.bhel.com/Bhel\\_vendor\\_section.aspx](https://pem.bhel.com/Bhel_vendor_section.aspx)

- Bidders to note that following form the part of tender documents:
  - Enquiry terms & conditions (NIT)
  - Technical PQR
  - Special Conditions of Contract (SCC Rev. 0) of Project.

- d. General Conditions of Contract (GCC) Rev 07 & corrigenda to GCC Rev. 07 comprising of: **Instructions to Bidders (ITB) and General Commercial Terms & Conditions (GCTC)**
  - e. Technical Specifications & BOQ
  - f. Local Content Certificate
  - g. Land Border Certificate
4. Any hidden conditions/deviations mentioned elsewhere in offer and standard pre-printed terms & conditions of the tenderers shall not be considered valid.
  5. Tenders shall be submitted strictly in accordance with the requirements of the above-mentioned tender documents. Deviations (Technical as well as Commercial), if any, shall be listed out separately in Annexure-II of GCC Rev-07 along with reasons for taking such deviations in the bidding format in E-Procurement portal (NIC portal). Any deviations (Technical as well as Commercial) not mentioned in the Annexure-II shall not be considered. Bidders to note all the points mentioned in "Notes" of Annexure-II of GCC Rev.07.
  6. Bidder has to submit "NO DEVIATION CERTIFICATE FOR COMMERCIAL TERMS AND CONDITIONS as per General Conditions of Contracts (GCC, Rev.07), Special Conditions of Contract and Notice Inviting Tender (NIT)" in case of no deviations. Applicable interest rate in respect of loading of deviations in the offer(s) shall be "Repo Rate + 4%". This will supersede interest rate mentioned in GCC Rev 07 including corrigenda to GCC Rev 07.
  7. Unsolicited fresh/revised bids shall not be entertained.
  8. If any bidder has mentioned the term "Not Applicable" / "not required" / "not quoted" in BHEL price format, the same to be substantiated by the bidder. If such item is required to be supplied for system completion in future, same will be supplied free of cost by the successful bidder.
  9. Purchaser shall be under no obligation to accept the lowest or any other tender and shall be entitled to accept or reject any/all tender(s) in part or full without assigning any reason whatsoever.
  10. Tenderers must enclose the Quality Plan in the prescribed format, for approval. Equipment will be dispatched only after Purchaser's/Owner's inspection of the hold points specified in the approved Quality Plan and issue of Material Dispatch Clearance Certificate (MDCC).
  11. Offers should be submitted separately in two parts online through e-procurement system only (NIC portal), however, all correspondence thereof, shall be addressed to the following persons and sent at the following address:

<b>Mr. Lokesh Ghildiyal</b> <b>Sr. Manager, PG-I</b> <b>E-mail: lokesh.ghildiyal@bhel.in</b> <b>Mob: 9560700557</b>	<b>Ms. Manisha Gupta</b> <b>Sr. Manager, PG-I</b> <b>E-Mail: manisha.gupta@bhel.in</b> <b>Mob: 7834815222</b>
M/s. Bharat Heavy Electricals Ltd., Project Engineering Management, 3 <sup>rd</sup> Floor, New Building, BHEL, Plot No 25, Sector-16A, Noida-201301, U.P., INDIA	

12. Evaluation will be done on overall L1 (Total cost to BHEL) basis excluding GST with necessary loading as applicable. Incomplete offer or offer for Part scope for the Project, shall be summarily rejected. The Evaluation Currency for this tender shall be INR.

**13. Integrity Pact:** Integrity pact is applicable for subject package.

(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. 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.

1. Dr. Sarat Kumar Acharya, Ex CMD, NLC [iem1@bhel.in](mailto:iem1@bhel.in)
2. Shri R. Mukundan, IRPS (Retd.) [iem2@bhel.in](mailto:iem2@bhel.in)
3. Shri Madan Lal Meena, IAS (Retd.) [iem3@bhel.in](mailto:iem3@bhel.in)

(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.

(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.

*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 in the NIT."*

**Details of contact persons shall be as per point no. 11 above.**

**14. Govt. of India's Public Procurement Policy – Preference to Make in India Clause: -**

"For this procurement, the local content to categorize a supplier as a 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), (PPP-MII) Order 2017 dt. 19/07/2024 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".

- a) Eligibility of Suppliers: **only Class I Local Suppliers are eligible** to quote against this tender.
- b) **Minimum Local Content required** for qualifying a bidder as "Class I Local Supplier": **60%**
- c) The local supplier at the time of tender, bidding or solicitation shall be required to provide a certificate w.r.t. minimum local content, in accordance with para 9 of PP-MII order revision dated 19.07.2024.
- d) In accordance with para 9 (a) of DPIIT's PP-MII order 2017 revision dated 19.07.2024, " Class I Local Suppliers/ ~~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 the " Class I Local Suppliers/ ~~Class II Local Supplier~~". They shall also give details of the location(s) at which the local value addition shall be made.

**The package is divisible in nature.**

15. Bidder to note that this is a conditional Open tender enquiry subject to following conditions: -
  - a. Qualification of Technical and/or Financial PQR as applicable.
  - b. Techno-commercial compliance to the NIT (Bid).
  - c. Mandatory conformance to applicable Govt. of India rules/ guidelines/ notifications/ circulars as issued or amended time to time.
  - d. Techno-commercial approval of bidder by BHEL / customer for which documents as asked by BHEL/customer to be submitted by bidder.
  - e. Approval of bidder by Customer: - Approval shall be taken up by BHEL with end customer-based on the credentials / reference list. Hence, Bidders to submit the following (as part of their credentials) along with their offer
    - Sub-vendor questionnaire along with all the supportive documents against details furnished therein (signed & stamped on each page). Format enclosed with bid documents.
16. Compliance of model clauses as provided in Annexure-III of Ministry of Finance Order (Public Procurement No. issued on 23.07.2020 & 23.02.2023 (Restrictions under Rule 144 (xi) of the GFR,2017) shall be applicable for subject tender. Model Certificates provided in same Annexure-III shall also be complied. Further, relevant clause of order no. 25-11/6/2018-PG dated 02.07.20 issued by MoP shall also be complied. An undertaking regarding Model Clauses (as applicable from Annexure-III) shall be furnished by bidders along with bid documents.
17. CIF is not available for this package.
18. For bidders (who are not registered with BHEL-PEM) -Online Registration Portal is operational in BHEL. Registration in BHEL-PEM is not mandatory for this tender. However, Non-registered Vendors, who wish to apply for registration with BHEL-PEM, can apply through Online Registration Portal available at [www.bhelpem.com](http://www.bhelpem.com) → vendor section → Online Supplier Registration. All credentials and/or documents duly signed and stamped related to registration may be uploaded on the website and submit the application for registration.
19. All corrigenda, addenda, amendments, time extensions, clarifications etc. to the tender will be hosted on BHEL website only (<https://eprocarebhel.co.in>) under subject tender reference. Bidders are requested to visit our website from time to time to keep themselves updated. Bidders may go through the Sellers' manual & Help documents provided on E-Procurement Portal website & obtain required Digital Signature Certificate for participating in the subject Tender. For Bidders' convenience, the Helpdesk Nos. of E-Procurement (NIC) Portal is available at website i.e. <https://eprocarebhel.co.in>.
20. If any bidder uploads price bid in the unpriced section (techno-commercial attachment page) of the tender in e- Procurement (NIC portal), in that case bidder(s) shall only be responsible for such mistake and any consequences thereof. Hence all bidders are requested to be more careful at the time of uploading the Unpriced and Price Bid for Part-I and Part-II respectively to avoid mismatch.
21. Bidders to note that "This item /package/system falls under the list of items defined in para 3 of ministry of finance guideline dated 20.09.16 (procurement of items related to public safety, health, critical security operations and Equipment etc.) & hence criteria of prior experience /turnover shall be same for all bidders including start-up /MSME".
22. PVC shall be applicable for this enquiry as per formulae enclosed with technical specification. The price variation shall be limited to +20% of total ex-works price actually supplied (cable size wise) and -ve price variation shall be unlimited.

PVC shall be payable only for contractual delivery period (including delivery extension without imposition of LD, if any) i.e. no (+ve) PVC shall be payable for delay in delivery attributed to vendor. In case of delayed delivery cases, PVC as applicable on contractual delivery date & actual delivery date shall be compared and lower PVC shall be payable to the vendor.

23. Overall (%) variation in contract values (due to changes in the scope) shall be up to (-) 30% to (+) 30% of the total contract value”, same shall supersede quantity variation in Cl. 6.0 of GCTC of GCC Rev. 07.

24. **Delivery & Payment terms:**

SCOPE	DELIVERY	PAYMENT TERM
Main Supply	Delivery completion for Main supply Lot-1 shall be 150 days from the PO date. Delivery completion for Subsequent lot (for Quantity Variation) shall be 120 days from BHEL Clearance.	As per Clause 9.1.1 of GCTC of GCC Rev. 07

25. **Guarantee Period:** Guarantee Period shall be as per clause no. 12 of General Commercial Terms & Conditions (GCTC) of GCC Rev. 07.

26. **Performance Security:**

Supplier may opt any of the following for submission of Performance Security: -

**26.1.1:** Initially 10% of the contract value (Total ex-works price excluding PVC). 5% of the contract value (Total ex-works price excluding PVC) will be released after completion of Main Supply based on certification by PG. However, balance 5% of the contract value (Total ex-works price excluding PVC) will be released on completion of all contractual obligations, including guarantee/warranty obligations based on certification by PG.

Or

**26.1.2:** 5% of the contract value (Total ex-works price excluding PVC). Additional 5% of the contract value (Total ex-works price excluding PVC) will be deducted & retained from first bill & subsequent bill(s) of the same contract (in case the value of first bill is less than 5% of the contract value). The retention amount will be released after completion of Main Supply based on certification by PG. However, balance 5% of the contract value (Total ex-works price excluding PVC) will be released on completion of all contractual obligations, including guarantee/warranty obligations based on certification by PG.

**26.2: Modes of Deposit:** Supplier has to furnish Performance Security in the following forms:

- (i) Local cheques of Scheduled Banks (subject to realization)/ Pay Order/ Demand Draft/ Electronic Fund Transfer in favour of BHEL.
- (ii) Bank Guarantee from Scheduled Banks / Public Financial Institutions as defined in the Companies Act. The Bank Guarantee format should have the approval of BHEL.
- (iii) Fixed Deposit Receipt issued by Scheduled Banks / Public Financial Institutions as defined in the Companies Act (FDR should be in the name of the Contractor, a/c BHEL).

(iv) Securities available from Indian Post offices such as National Savings Certificates, Kisan Vikas Patras etc. (held in the name of Contractor furnishing the security and duly endorsed/ hypothecated/ pledged, as applicable, in favour of BHEL).

(v) Insurance Surety Bond.

BHEL will not be liable or responsible in any manner for the collection of interest or renewal of the documents or in any other matter connected therewith.

**26.3:** Performance Security is to be furnished within 14 days from the date of PO/LOA and it should remain valid for a period of 60 (sixty) days beyond the date of completion of all contractual obligations of the supplier, including warranty obligations. Initial validity of Performance Security shall be as per NIT. However, Performance Security validity is to be extended based on the actual delivery of package.

**Initial performance security (PBG) validity: 25 months from PO date**

However, Performance Security validity is to be extended based on the actual delivery of package.

**26.4:** Performance Security value can be proportionately reduced after completion of Guarantee Period Unit-wise/ Stage-wise/Set-wise/Scope/Lot wise (Main Supply/Mandatory spares/Services excluding PG test) subject to the units/sets/stages/Scope/Lot (Main Supply/Mandatory spares) being explicitly specified in delivery terms in the contract. However, project wise Performance Security for the last unit/set/stage will be released only after completion of all contractual liability or guarantee period, whichever is later.

**26.5 Forfeiture and Release/Return of Performance Security:**

- a) The Performance Security will be forfeited and credited to BHEL's account in the event of a breach of contract by the Supplier.
- b) Performance Security shall be refunded to the Supplier without interest, after he duly performs and completes the contract in all respects but not later than 60 (Sixty) days of completion of all such obligations including guarantee/warranty under the contract.
- c) The Performance Security shall not carry any interest.

**Note** - In case of BG from private banks, a clause shall be incorporated in the text of bank guarantee that it can be enforced by being presented at any branch of the bank located in the Delhi-NCR.

This clause shall prevail over clause no. 11.0 of GCTC of GCC rev 07.

**27. Earnest Money Deposit: EMD amount shall be Rs. 6 (Six) Lakhs.**

EMD is to be submitted by all the bidders along with their bids (except Micro and Small Enterprises (MSEs) or Start-ups as recognized by Department for Promotion of Industry and Internal Trade (DPIIT)).

Modes of deposit: -

The EMD may be accepted only in the following forms:

- (i) Electronic Fund Transfer credited in BHEL account (before tender opening)

BHEL-PEM account details are as follows:

Bank name, State Bank of India

Account No: 39922687394

IFSC: SBIN0017313

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- (ii) Banker's cheque/ Pay order/ Demand draft, in favour of BHEL-PEM, Noida (along with the offer).
- (iii) Fixed Deposit Receipt (FDR)
- (iv) Bank Guarantee from any of the Scheduled Banks.
- (v) Insurance Surety Bonds.

Scanned copy of EMD shall be uploaded by Supplier in the online bid and hard copy of the same (excluding EFT at s.no (i)) shall have to be submitted to the buyer within 7 (Seven) working days of bid opening, failing which the bid shall be rejected by giving a suitable cut-off date.

The EMD shall remain valid for a period of 45 (forty-five) days beyond the final bid validity period. The EMD shall also be extended in case of extension of bid/offer validity.

#### **Forfeiture of EMD**

- a) A bidder's EMD will be forfeited if the bidder withdraws or amends its/his tender or impairs or derogates from the tender in any respect within the period of validity of the tender or if the successful bidder fails to furnish the required performance security within the specified period mentioned in the Tender.
- b) EMD by the tenderer to be withheld in case any action on the bidder is envisaged under the provisions of extant "Guidelines on Suspension of business dealings with suppliers/ contractors (abridged version of guidelines is available on www.bhel.com)" and forfeited/ released based on the action as determined under these guidelines.
- c) Bid securities of the unsuccessful bidders shall be returned to them after expiry of the final bid validity period and latest by the 30th day after the award of the contract. However, bid securities of unsuccessful bidders during first stage i.e. technical-commercial evaluation etc. shall be returned within 30 days of declaration of result of first stage i.e. technical-commercial evaluation.
- d) Bid security shall be refunded to the successful bidder on conclusion of the order/ receipt of a performance security.
- e) EMD shall not carry any interest.

28. **Validity of contract (PO rates, terms and conditions):** Vendor has to make supply of goods/services as per the delivery time mentioned above. However, due to unavoidable circumstances if delay happens in providing inputs/ clearances (inputs, Engineering approvals, deputing inspector for inspection, issuance of MDCC and any hold imposed owing to site issues etc.) for which delivery time extension is admissible, in such situation it shall be obligatory at vendor part to execute the contract at PO rates, terms and conditions where inputs/ clearances has been accorded within validity of contract. Validity period for various activities shall be as defined below or as mentioned in the NIT.

#### **30.1. Validity of the contract for main supply including quantity variation.**

**Contract shall be valid for 540 days (C days) from the PO date.** However, delay at Supplier's end (if any) shall be added to the validity period and contract validity shall get extended by the delay period at Supplier's end.

For example: Original Delivery period for main supply: A (in days)

Delay at Supplier's end: B (in days beyond "A" days)

Contract validity: C+B (in days) where C is 540 days

Supplier to note that B is the Supplier delay days beyond original contractual delivery period for main supply /extended delivery period owing to time taken by BHEL.

#### **Notes:**

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- a. Main supply including quantity variation, released/ cleared for manufacturing within contractual validity period, to be supplied by vendor/supplier at PO rates, terms and conditions.
- b. Execution of the contract quantities released beyond contract validity period shall be decided on mutual consent basis at PO rates, terms and conditions.

**29. Delivery Extension: Extension of contractual delivery time:**

Delivery time mentioned in the NIT includes Engineering completion time (time for drawing/document submission/resubmission by the vendor and review/approval of the same by the BHEL/End customer), manufacturing, inspection, Packing and dispatch time. Due diligence is to be observed by the vendor to ensure timely completion of engineering and supply.

During the execution of the contract, time loss occurred owing to the reason attributable to BHEL besides force majeure shall be considered for delivery time extension to the vendor as given below:

- I. Any Delay in providing comments/ approval on Primary drawing/documents beyond the stipulated time as specified in NIT.
- II. Time Loss in approval of the drawing/document as a result of increase in the iteration not attributable to the vendor (i.e. resubmission owing to end customer comments) as certified by BHEL. Time extension equivalent to the resubmission time noted in the tech. spec and consequential increase in the approval time in lieu of increase in iteration shall be applicable. However, for incomplete re- submission time loss shall be in vendor account.
- III. Delay in providing engineering input/material by BHEL.
- IV. Delay in deputing inspector for inspection and delay in release of MDCC in line with GCC Rev 07 terms.
- V. Any hold put by BHEL for whatever reasons during execution of contract (within contract validity period), time extension equivalent to hold period shall be admissible. However, in the event hold period continues for more than 30 days then, an additional fifteen days for the purposes of mobilization and demobilization of resources shall also be admissible.

**Note:** Extension in delivery period if any with or without imposition of LD shall be considered after detailed delay analysis based on provisions given above. However, no delay analysis will be applicable if supply is completed within delivery schedule as specified in Purchase order.

30. **Reverse Auction** - BHEL shall be resorting to Reverse Auction (RA) (Guidelines as available on [https://pem.bhel.com/Bhel\\_vendor\\_section.aspx](https://pem.bhel.com/Bhel_vendor_section.aspx) ) 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. "Vendors to note that above RA clause will supersede clause no 13 of "Instruction to Bidders" of GCC Rev 07".
31. **Purchase preference will be given to MSEs** having valid Udyam Registration and whose credentials are validated online through Udyam Registration portal 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 themselves of the Purchase preference, the bidder must be the manufacturer / OEM of the offered product. Traders are

excluded from the purview of Public Procurement Policy for Micro and Small Enterprises and hence resellers offering products manufactured by some other OEM are not eligible for any purchase preference. 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 and Buyer will decide eligibility for purchase preference based on documentary evidence submitted, while evaluating the bid. If L-1 is not an MSE and MSE Seller (s) has / have quoted price within L-1+ 15% of margin of purchase preference / price band defined in relevant policy, such MSE Seller shall be given opportunity to match L-1 price and contract will be awarded for approx. 25% of total tendered value. The buyers are advised to refer the OM No. F.1/4/2021-PPD dt. 18.05.2023 for compliance of Concurrent application of Public Procurement Policy for Micro and Small Enterprises Order, 2012 and Public Procurement (Preference to Make in India) Order, 2017. Benefits of MSE will be allowed only if seller is validated on-line and approved by Buyer after evaluation of documents submitted.

**Notes:**

- i. In case of more than one such MSE (when MSE preference is exercised), within the price band of L1 +15%, the quantity shall be shared proportionately, provided the available quantum can be split.
- ii. However, owing to practical constraints of maintaining drum length (stipulated in BOQ) and small quantity of a particular size, minor quantity adjustments may be done to meet the 75:25 split ratio upto maximum extent. Further, during contract execution, if BHEL finds issues in execution of contracts then split ratio (i.e. 75:25) may be altered to meet the project requirement. (if required).

32. Any Bidder falling under MSE category shall furnish the following details & submit documentary evidence/ Govt. Certificate etc. in support of the same along with their techno-commercial offer.

Type under MSE	SC/ST Owned	Women Owned	Others excluding SC/ST& Women Owned)
Micro			
Small			

Note: If the bidder does not furnish the above in the tender, offer shall be processed construing that the bidder is not falling under MSE category.

**33. Liquidated Damages:**

35.1 Supply : Buyer reserves the right to recover from the Supplier, as agreed liquidated damages and not by way of penalty, a sum equivalent to half (½) percent of the undelivered portion of main supply contract value excluding GST per week or part thereof, subject to a maximum of ten (10) percent of the total of main supply contract price excluding GST, if the Supplier fails to deliver any part of the ordered goods/stores within the period stipulated in the Order/ Contract.

33.2 In case of any amendment/ revision, LD shall be linked to the amended/ revised contract value and delivery date(s).

33.3 LR/RR date for indigenous supplies shall be treated as the date of dispatch for delay analysis and levying LD. Deduction of LD from vendor bills shall be on proportionate basis. However, it shall be vendor's responsibility to ensure material receipt at site for indigenous supply within maximum validity of E-way bill as per extant Government GST law.

33.4 If Order/ Contract involves two or more Units/ Sets/lots/Stages, then Liquidated Damages shall be levied on order/ contract value excluding GST for undelivered portion of the delayed Unit/ Set/ Stage/Lot, provided delivery stipulated in the Order/ Contract is Unit/ Set/ Stage/Lot wise and total LD amount shall be limited to 10% of total Order/ amended Order value excluding GST of delayed Unit/ Set/ Stage/ Lot.

33.5 The sum specified above is not a penalty but a genuine pre-estimate of the loss/ damage which will be incurred by the Buyer directly or indirectly on account of delay in delivery of material/equipment/services on the part of the Supplier and the said amount will be deductible without proof of actual loss or damage caused by such delay.

"Supplier to essentially quote prices against each line item of the BOQ in the respective columns. 'NIL', 'Free of Cost', 'Zero' etc. shall not be mentioned for any line item of the BOQ. In such case, Liquidated Damages shall be levied on the Total order/ contract value instead of undelivered portion of the Order/ contract. Also, if price of any line item (X) is mentioned 'Included' in any other line item (Y), then in case of delay in delivery of item (X), LD shall be applicable on value of item (Y)."

34. Bidders who are participating in this tender may please note that GeM seller ID is mandatory before placement of order.

**35. Breach of Contract, Remedies and Termination:**

In case of Breach of Contract, BHEL shall recover 10% of the contract value from the Supplier using following instruments:

- (i) encashment of security instruments like EMD, Performance Security with PEM against the said contract.
- (ii) balance amount (if value of security instruments is less than 10% of the contract value) from other financial remedies i.e. available bills of the Supplier, retention amount etc. with PEM.
- (iii) balance amount from security instruments like EMD, Performance Security and other financial remedies i.e. available bills of the Supplier, retention amount etc. with other units of BHEL.
- (iv) Any other mode as deemed fit by the Buyer at its sole discretion.
- (v) if recovery is not possible then legal remedies shall be pursued.

However, Supplier shall continue performance of the Order/ Contract, under all circumstances, to the extent not cancelled.

**36. CONFLICT OF INTEREST:**

"Bidders having a conflict of interest shall not be eligible to participate in the tender process. In this regard, declaration as per 'Annexure A' duly signed by authorised signatory of the bidder is to be mandatorily provided by the bidder along with the bid.

(Note: Authorised Signatory should be either Board member/owner of the firm or person authorised for signing by board/owner of the firm)"

37. All suppliers are informed that the facility for online invoice registration and document uploading has been enabled in the BHEL SUVIDHA Portal (<https://suvidha.bhel.in/suvidha/>). It is mandatory for all suppliers to register their invoices to be exclusively through the system along with all the requisite documents as per GCC.

38. Grievance Redressal Mechanism: To promote transparency and ensure fair treatment of all bidders, a structured Grievance Redressal Mechanism is in place to address any concerns or issues arising during the tendering process or in subsequent business dealings with the company.

Suppliers/Contractors are requested to follow the below escalation process for grievance resolution:

1. First Level: Any grievance should initially be addressed to the designated Dealing Officer, whose contact details are provided in the Notice Inviting Tender (NIT)/Contract.
2. Second Level: If the issue remains unresolved, it may be escalated by lodging a formal grievance through the SUVIDHA Portal: <https://suvidha.bhel.in/suvidha/>. Responses will be provided in accordance with the defined escalation matrix.

39. Detailed offers are to be uploaded including the following along with the Price schedule as per BHEL format enclosed with NIT:

- Acceptance of BHEL-PEM GCC (Rev.-07) & Corrigenda to GCC Rev. 07
- Acceptance of Special Conditions of Contract (SCC Rev. 01) for the project
- Technical & Commercial Deviations if any along with Cost of withdrawal in Annexure-II of GCC Rev 07
- Technical Pre-Qualifying Requirement (Tech PQR)
- Along with your offer, please submit a copy of this letter duly signed & stamped on each page as token of acceptance of terms & instructions conveyed.
- Un-Priced price format duly filled in 'Quoted' or 'Q' in each column/row.
- Filled Format of Certification reg. Local content
- Declaration regarding Land Border
- Declaration for conflict of interest

All the above Tender Documents shall automatically become a part of the Order/Contract after its finalisation.

**Please note that all correspondence from BHEL-PEM before Part-I opening shall also be part of NIT.**

Thanking You

Yours faithfully,  
For and on behalf of BHEL-PEM

Lokesh Ghildiyal  
(Sr. MANAGER/PG-I/BHEL PEM)

**Enclosures:**

1. Technical Specification
2. Technical PQR
3. Conflict of interest – Declaration (Annexure-A)
4. Format of Certification reg. Land Border (Annexure-B)
5. Format of Certification reg. Local Content (Annexure-C)
6. Unpriced BOQ cum Price format (Annexure-I)
7. Unpriced Deviation schedule (Annexure-II)
8. SCC Rec. 01
9. Integrity Pact

**Annexure-A**  
**(on Letter head of Company/Firm)**

**Ref.....**

**Date.....**

To,  
Bharat Heavy Electricals Limited  
PEM, BHEL Sadan, Plot No 25,  
Sector -16A, Noida (UP)-201301

**Subject: - Conflict of interest – Declaration**

**Reference (s):**

Bid No.:

Name of Package: LT PVC Control Cable  
Project: 2 X 800 MW NTPC LARA STPS STAGE-II

Dear Sir/Madam,

I...(Name)..., (Designation)... on behalf of M/s.... (Name of the bidding company/firm)  
.... - the authorised signatory of the reference bid, hereby submit the declaration as below.

The bidder notes that a conflict of interest would said to have occurred in the tender process and execution of the resultant contract, in case of any of the following situations:

- i) If its personnel have a close personal, financial, or business relationship with any personnel of BHEL who are directly or indirectly related to the procurement or execution process of the contract, which can affect the decision of BHEL directly or indirectly;
- ii) The bidder (or his allied firm) provided services for the need assessment/ procurement planning of the Tender process in which it is participating;
- iii) Procurement of goods directly from the manufacturers/suppliers shall be preferred. However, if the OEM/Principal insists on engaging the services of an agent, such agent shall not be allowed to represent more than one manufacturer/ supplier in the same tender. Moreover, either the agent could bid on behalf of the manufacturer/ supplier or the manufacturer/ supplier could bid directly but not both. In case bids are received from both the manufacturer/ supplier and the agent, bid received from the agent shall be ignored. However, this shall not debar more than one Authorised distributor (with/ or without the OEM) from quoting equipment manufactured by an Original Equipment Manufacturer (OEM) in procurements under a Proprietary Article Certificate.
- iv) A bidder participates in more than one bid in this tender process. Participation in any capacity by a Bidder (including the participation of a Bidder as a partner/ JV



member or sub-contractor in another bid or vice-versa) in more than one bid shall result in the disqualification of all bids in which he is a party. However, this does not limit the participation of an entity as a sub-contractor in more than one bid if he is not bidding independently in his own name or as a member of a JV.

The Bidder declares that they have read and understood the above aspects, and the bidder confirms that such conflict of interest does not exist and undertakes that they will not enter into any illegal or undisclosed agreement or understanding, whether formal or informal with other Bidder(s), in this regard. 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, the same will be considered as a violation of the tender conditions, and suitable action shall be taken by BHEL as per extant policies/ guidelines.

Yours truly

..... (Authorised Signatory)

..... (Firm name)

***Note: Authorised Signatory should be either Board member/owner of firm or person authorised for signing by board/ owner of the firm. In case the authorised signatory is other than board/owner of the firm, then authorisation letter from the board/owner of the firm is also to be enclosed.***

**Annexure-B**

**(Letter head of Company)**

**Bid No. & Date** \_\_\_\_\_

Ref.....

Date.....

To,  
Bharat Heavy Electricals Limited  
PEM, PPEI Building, Plot No 25,  
Sector -16A, Noida (U.P)-201301

**Subject: - DECLARATION REGARDING LAND BORDER**

Dear Sir,

This has reference to: -

1. Our offer for Supply of **LT PVC Control cable** package for **2 X 800 MW NTPC LARA STPS STAGE-II** against above mentioned Tender.
2. Order dated 23.07.2020 & 23.02.2023 reg. restriction under rule 144 (xi) of GFR issued by Ministry of Finance, Department of Expenditure Public Procurement Division.

I have read the clause regarding restriction on procurement from a bidder of a country which shares a land border with India. I hereby certify that **M/s .....**, is not from such a country and is eligible to be considered.

Thanking you,

Sign & Signature (Not below Director/owner of the company)

Lokesh Ghildiyal /Sr.Manager/PG-I  
PS-Project Engineering Management,  
3<sup>rd</sup> Floor, New Building, BHEL,  
Plot no. 25, Sector – 16A, Noida (UP) 201301, INDIA  
Phone: +91-9560700557

Regd. Office  
BHEL House Siri Fort  
New Delhi-110049



Annexure-C

**(Letter head of Company)**

Ref.....

Date.....

To,  
Bharat Heavy Electricals Limited  
PEM, PPEI Building, Plot No 25,  
Sector -16A, Noida (U.P)-201301

**Subject: - Certification Regarding Local Content**

Reference: Bid No.  
Name of Package: LT PVC Control Cable

Dear Sir,

We hereby certify that items offered by us for **LT PVC Control Cable** for **2 X 800 MW NTPC LARA STPS STAGE-II** project meets the requirement of minimum local content of NIT and Public Procurement (Preference to Make in India), Order 2017 dated-15.06.2017, 28.05.2018, 29.05.2019, 04.06.20, 16.09.20, 16.11.21 and 19.07.2024.

Local content of the items being offered by us is ..... %age.

We further confirm that:

- a. Details of location at which the local value addition is made will be our registered works at .....  
.....  
..... (complete address of the works)
- b. Imported items sourced locally from resellers/distributors shall be excluded from calculation of local content.
- c. The licence fees/royalties paid/technical charges paid out of India shall be excluded from local content calculation.

We hereby certify that local content calculation has been done in line with revised Public procurement order 2017, dated 19.07.2024.

Yours truly

..... (Authorized Signature of company)

..... (Firm name)

Lokesh Ghildiyal /Sr.Manager/PG-I  
PS-Project Engineering Management,  
3<sup>rd</sup> Floor, New Building, BHEL,  
Plot no. 25, Sector – 16A, Noida (UP) 201301, INDIA  
Phone: +91-9560700557

Regd. Office  
BHEL House Siri Fort  
New Delhi-110049



**Letter head of Company**

Ref.....

Date.....

**Reference: Tender Enquiry Ref. no. ....**

**Name of Package: LT PVC Control Cable**

**Projects Name: 2 X 800 MW NTPC LARA STPS STAGE-II**

NO COMMERCIAL DEVIATION

Yours very truly  
..... (authorized signatory of company)  
..... (firm name)  
**Company's Seal/stamp**

**INTEGRITY PACT****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 \_\_\_\_\_

\_\_\_\_\_ (hereinafter referred to as "Contract"). 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 panel of Independent External Monitor(s) (IEMs), 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 Bharatiya Nyaya Sanhita (BNS) 2023 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. The Bidder(s)/ Contractor(s) commits himself to observe the following principles during 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 Bharatiya Nyaya Sanhita (BNS) 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 shall 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, terminate the contract, if already awarded, exclude from future business dealings and/ 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 (s) from the tender process before award / order acceptance according to Section 3, the Principal is entitled to demand and recover the damages equivalent to Earnest Money Deposit/ Bid Security.
- 4.2 If the Principal is entitled to terminate the Contract according to Section 3, or terminates the Contract in application of Section 3 above, the Bidder(s)/ Contractor (s) transgression through a violation of Section 2 above shall be construed breach of contract and the Principal shall be entitled to demand and recover from the Contractor an amount equal to 5% of the contract value or the amount equivalent to Security Deposit/ Performance Bank Guarantee, whichever is higher, as damages, in addition to and without prejudice to its right to demand and recover compensation for any other loss or damages specified elsewhere in the contract.

### **Section 5 - Previous Transgression**

- 5.1 The Bidder declares that no previous transgressions occurred in the last 3 (three) years (to be reckoned from date of bid submission) with any other company in any country conforming to the anti-corruption approach in India that could justify his exclusion from the tender process. The date of such transgression, for the purpose of disclosure by the bidders in this regard, would be the date on which cognizance of the said transgression was taken by the competent authority. The transgression(s), for which cognizance was taken even before the said period of three years, but are pending conclusion, shall also be reported by the bidders.
- 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 or action can be taken as per the separate "Guidelines on Banning of Business dealings with Suppliers/ Contractors", framed by the Principal.

#### **Section 6 - Equal treatment of all Bidder (s)/ Contractor (s) / Sub-contractor (s)**

- 6.1 The Principal will enter into Integrity Pacts with identical conditions as this Integrity Pact with all Bidders and Contractors.
- 6.2 In case of a joint venture, all the partners of the joint venture should sign the Integrity Pact. In case of Sub-contracting, the Principal Contractor shall be solely responsible for the adherence to the provisions of IP by the sub-contractor(s).
- 6.3 The Principal will disqualify from the tender process all Bidders who do not sign this Integrity 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 panel of Independent External Monitor (s) (IEMs) for this Integrity Pact. The task of the IEMs is to review independently and objectively, whether and to what extent the parties comply with the obligations under this Integrity Pact on receipt of any complaint by them from the bidder(s).
- 8.2 The IEMs are 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 IEMs shall be provided access to all documents/ records pertaining to the Contract, for which a complaint or issue is raised before them as and when warranted. However, the documents/records/information having National Security implications and those documents which have been classified as /Top Secret are not to be disclosed.
- 8.4 The Principal will provide to the IEMs 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 IEMs the option to participate in such meetings.
- 8.5 The role of IEM is advisory and the advice of IEM is non-binding on the Organization. However, as IEMs are invariably persons with rich experience who have retired as senior functionaries of the government, their advice would help in proper implementation of the IP.

- 8.6 For ensuring the desired transparency and objectivity in dealing with the complaints arising out of the tendering process, the matter should be examined by the full panel of IEMs jointly, who would look into the records, conduct an examination, and submit their joint recommendations to the Management. In case the full panel is not available due to some unavoidable reasons, the available IEM(s) will conduct examination of the complaints. Consent of the IEM(s), who may not be available, shall be taken on record.
- 8.7 The IEMs shall examine all the representations/grievances/ complaints received by them from the bidders or their authorized representative related to any discrimination on account of lack of fair play in modes of procurement and bidding systems, tendering method, eligibility conditions, bid evaluation criteria, commercial terms & conditions, choice of technology/ specifications etc.
- 8.8 The CMD, BHEL shall decide the compensation to be paid to the IEMs and its terms and conditions.
- 8.9 IEMs 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 Principal should be looked into by the CVO of the Principal.
- 8.10 If the IEMs have reported to the CMD, BHEL, a substantiated suspicion of an offence under relevant Bharatiya Nyaya Sanhita (BNS)/ 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 IEMs may also transmit this information directly to the Central Vigilance Commissioner, Government of India.
- 8.11 After award of work, the IEMs shall look into any issue relating to execution of Contract, if specifically raised before them. As an illustrative example, if a Contractor who has been awarded the Contract, during the execution of Contract, raises issue of delayed payment etc. before the IEMs, the same shall be examined by the panel of IEMs.
- 8.12 However, the IEMs may suggest systemic improvements to the management of the Principal, if considered necessary, to bring about transparency, equity and fairness in the system of procurement.
- 8.13 The word `Monitor' would include both singular and plural.

### **Section 9 - Pact Duration**

- 9.1 This Integrity Pact shall be operative from the date this Integrity Pact is signed by both the parties. Any violation of the same would entail disqualification of the bidders and exclusion from future business dealings.
- 9.2 If any claim is made/ lodged during currency of this Integrity Pact, 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 Integrity Pact is subject to Indian Laws and exclusive jurisdiction shall be of the competent Courts as indicated in the Tender or Contract, as the case may be.
- 10.2 Changes and supplements as well as termination notices need to be made in writing.

- 10.3 If the Bidder(s)/ Contractor(s) is a partnership or a consortium or a joint venture, this Integrity Pact shall be signed by all partners of the partnership or joint venture or all consortium members.
- 10.4 Should one or several provisions of this Integrity Pact turn out to be invalid, the remainder of this Integrity Pact 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 Integrity Pact with the Principal would be competent to participate in the bidding. In other words, entering into this Integrity Pact would be a preliminary qualification.
- 10.6 In the event of any dispute between the Principal and Bidder(s)/ Contractor(s) relating to the Contract, in case, both the parties are agreeable, they may try to settle dispute through Mediation before the panel of IEMs in a time bound manner. If required, the Principal may adopt any mediation rules for this purpose. However, not more than five meetings shall be held for a particular dispute resolution. The fees/expenses on dispute resolution shall be equally shared by both the parties. In case, the dispute remains unresolved even after mediation by the panel of IEMs, either party may take further action as the terms & conditions of the Contract.

**Lokesh  
Ghildiyal**

Digitally signed by Lokesh Ghildiyal  
 DN: cn=Lokesh Ghildiyal, o=BHEL, ou=PS-PEM, email=lokesh.ghildiyal@bhel.in, c=IN  
 Date: 2026.03.11 17:24:20 +05'30'

-----  
 For & On behalf of the Principal  
 (Office Seal)

-----  
 For & On behalf of the Bidder/ Contractor  
 (Office Seal)

Place \_\_\_\_\_

Date \_\_\_\_\_

Witness: \_\_\_\_\_  
 (Name & Address) \_\_\_\_\_

\_\_\_\_\_

Witness: \_\_\_\_\_  
 (Name & Address) \_\_\_\_\_

\_\_\_\_\_

**LARA SUPER THERMAL POWER PROJECT  
STAGE II ( 2X800 MW)**

**TECHNICAL SPECIFICATION  
FOR  
LT PVC CONTROL CABLE**

**SPECIFICATION No. PE-TS-508-507-E003  
ISSUE NO. 01  
REV NO. 00**



**BHARAT HEAVY ELECTRICALS LIMITED  
POWER SECTOR  
PROJECT ENGINEERING MANAGEMENT  
NOIDA, INDIA**

	<b>TECHNICAL SPECIFICATION</b> <b>LT PVC CONTROL CABLE</b> <b>LARA SUPER THERMAL POWER PROJECT</b> <b>STAGE II ( 2X800 MW)</b>	PE-TS-508-507-E003
		Issue No: 01
		Rev. No. 00
		Date :09.02.2026

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TECHNICAL SPECIFICATION  
LT PVC CONTROL CABLE  
LARA SUPER THERMAL POWER PROJECT  
STAGE II ( 2X800 MW)

PE-TS-508-507-E003

Issue No: 01

Rev. No. 00

Date :09.02.2026

**SCOPE**

**SCOPE OF THIS PACKAGE COVERS THE FOLLOWING:**

SL.NO	PARAMETERS	REQUIREMENT
1	Supply Including Design, Engineering, Manufacturing of LT PVC Control cable	YES
a)	Main Supply	YES
b)	Commissioning Spares	NO
2	Painting	NO
3	Inspection & Testing	YES
4	Packing	YES
5	Transportation & Delivery To Site	YES
6	Erection & Commissioning	NO
7	Supervision of Erection & Commissioning	NO
8	Mandatory Spares	NO
9	O & M Service	NO
10	O & M Spares	NO



TECHNICAL SPECIFICATION  
LT PVC CONTROL CABLE  
LARA SUPER THERMAL POWER PROJECT  
STAGE II ( 2X800 MW)

PE-TS-508-507-E003

Issue No: 01

Rev. No. 00

Date :09.02.2026

<b>GENERAL TECHNICAL REQUIREMENT</b>	
1	It is not the intent to specify herein all the details of design and manufacturing. Bidder shall ensure that the offered equipment confirms in all respects to high standards of design, engineering and workmanship.
2	Bidder shall also ensure that the offered equipment shall comply with all applicable statutory and regulatory requirements.
3	In the event of any conflict between the requirements of two clauses of this specification, documents or requirements of different codes and standards specified, the more stringent requirement as per the interpretation of the owner shall apply.
4	Drawing/document submission shall be through web based Document Management System(DMS) of BHEL. Bidder would be provided access to the DMS for drawing/document submission. Bidder to ensure internet connectivity of min speed of 2Mbps at their end.
5	Drawings/ documents submitted by vendor at any stage shall be complete in all respects. Any incomplete drawing submitted shall be treated as non- submission with delays attributable to vendor. For any clarification/ discussion required to complete the drawings, the bidder shall depute his personnel to BHEL / Customer's Office as per the requirement for across the table submission/ finalizations of drawings.
6	Latest codes and standards shall be complied.
7	<p>Bidder shall furnish Type Test Certificate of specified Type Test as per quality plan which has been conducted within period of 10 years i.e. from 03/03/2023 up to 04/03/2013 . These reports should be for the tests conducted on the LT PVC Control Cable identical in all respects to those proposed to be supplied under this contract and test(s) should have been either conducted at an independent laboratory or should have been witnessed by a client.</p> <p>In absence of valid Type Test report vendor to conduct the same without any commercial &amp; delivery implication to BHEL.</p>
8	Bidder shall confirm compliance with the Quality Plan attached with the specification without any deviations. At contract stage, the Quality Plan as enclosed in the technical specification is to be appended with cover sheet bearing document number and description. The signed and stamped copy of the same shall be submitted to BHEL without making any changes in the contents of the document. There shall be no commercial implication to BHEL on account of minor changes in QP during contract stage.
9	Equipment must be safe, reliable and easy to maintain at all operating condition

	<b>TECHNICAL SPECIFICATION</b> <b>LT PVC CONTROL CABLE</b> <b>LARA SUPER THERMAL POWER PROJECT</b> <b>STAGE II ( 2X800 MW)</b>		PE-TS-508-507-E003
			Issue No: 01
			Rev. No. 00
			Date :09.02.2026
<b>TECHNICAL DATA - PART - A</b>			
<b>SL.NO</b>	<b>DESCRIPTION</b>	<b>UOM</b>	<b>DETAIL</b>
1.0	<b>DESIGN CODES &amp; STANDARDS</b>		
1.1	Standard applicable in general (Latest amendment to be referred if any)		IS:1554 (Part-1)
1.2	Current rating of cables		As per IS:3961 (P-2)
1.3	Short circuit rating		IEC 60949
1.4	Conductor		IS: 8130
1.5	PVC Insulation		IS 1554 (Part-1)
1.6	Inner sheath		IS 1554 (Part-1)
1.7	Outer sheath		IS 1554 (Part-1)
1.8	Core Identification (Upto 5 core)		Colour coding as per IS 1554 (Part-1)
1.9	Core Identification (Above 5 core)		By numbering as per IS 1554 (Part-1). Insulation to have black colour.
1.10	Armour		Galvanised Steel Round Wire/ Galvanised Steel Formed Wire Conforming to : (i) Type 'b' as per Table-5 of IS 1554-I and (ii) IS 3975; as per project requirements.
2.0	<b>DESIGN /SYSTEM PARAMETERS</b>		
2.1	Type of Cable		Flame Retardant-Low Smoke (FR-LSH) LT CABLE
2.2	Voltage Grade		1.1 kV
2.3	<b>INSTALLATION CONDITIONS AT SITE</b>		
2.3.1	Ambient air temperature	deg. C	50
2.3.2	Ground temperature	deg. C	30
3.0	<b>CONSTRUCTION FEATURES</b>		
3.1	<b>CONDUCTOR</b>		
3.1.1	Material type		Annealed Bare Copper (ABC)
3.1.2	Grade		Annealed high conductivity
3.1.3	Class		Class 2 (Stranded)
3.1.4	Shape		Circular

3.1.5	Compaction		Compacted/ Non-compacted as per IS 8130
3.1.6	Cable Size	sq.mm	As per unpriced 'price schedule'
3.2	PVC INSULATION		
3.2.1	Nominal thickness of insulation	mm	As per IS: 1554 (Part-1) Table-2
3.2.2	Material		Extruded PVC Type-A
3.2.3.1	Continuous withstand temperature	deg. C	70
3.2.3.2	Short-circuit withstand temperature	deg. C	160
3.2.4	Volume Resistivity	ohm cm	1X10 <sup>13</sup> ohm cm at 27 deg C 1X10 <sup>10</sup> ohm cm at 70 deg C
3.3	Extrusion		Sleeve extrusion not permitted.
3.3.1	Method of extrusion		Pressure Extruded / Vacuum Extruded
3.4	CORE IDENTIFICATION		As per IS
3.5	INNERSHEATH		
3.5.1	Thickness of inner sheath		As per IS 1554 (Part-1) Table-4
3.5.2	Material		Extruded PVC Type ST-1
3.5.3	Colour		Black
3.5.4	Whether FR-LSH		NO
3.5.5	Material of fillers (for multicore cables)		Same as inner sheath
3.5.6	Method of application		Extrusion
3.5.6.1	Multi-core cables:		Pressure extruded / Vacuum extruded
3.6	Armour		
3.6.1	Dimension		As per IS: 1554 Part-1 and tolerance as per IS:3975
3.6.2	Material		
3.6.2.2	Multi core		Galvanised steel round wire / Galvanised steel formed wire
3.6.3	Gap between armour wire		Not more than one armour wire space (No cross over / No over riding)
3.6.4	Paint on joint		Zinc rich paint shall be applied on armour joint surface of G.S.wire / formed wire
	Minimum Coverage		90%
3.6.5	Breaking load of Joint		95% of normal armour

3.7	OUTERSHEATH		
3.7.1	Thickness of outer sheath		As per Table-7 of IS: 1554 (Part-1)
3.7.2	Material		Extruded PVC Type ST1 as per IS: 5831.
3.7.3	Colour		Black
3.7.4	Whether FR-LSH		YES
3.7.5	Method of application		Extruded
3.7.6	Marking/ Embossing on Outer sheath		
3.7.6.1	At every 5 Meters		(i) Owner's Name (ii) Manufacturer's name and trade mark (iii) Year of manufacture (iv) Type of cable and voltage class (v) Nominal cross section area of conductor and no. of cores (vi) 'BHEL-PEM' (vii) 'FRLS'/ FRLSH
3.7.6.2	At every 1 Meters by embossing/ printing		Progressive Sequential length.Drum no. shall also be embossed/ printed.
3.8	FR-LSH CHARACTERISTICS		
3.8.1	Oxygen index		Minimum 29 as per ASTM D 2863
3.8.2	Temperature index		Minimum 250° C as per ASTM D 2863
3.8.3	Acid gas generation		Maximum 20% by weight as per IEC 60754-1
3.8.4	Smoke density rating		Maximum 60% as per ASTM D 2843
3.8.5	Flame retardance test for single cable (for cable OD ≤ 35mm)		As per IS 10810 Part 61
3.8.6	Flame retardance test for bunched cables		As per IS 10810 Part 62/ IEC-332 Part-3 (Category -B)
3.9	DIAMETERS		
3.9.1	Tolerance on overall diameter	mm	(±) 2 mm over the declared value

3.10	CABLE DRUM DETAILS	
3.10.1	Type	Steel
3.10.2	Standard drum length	AS per BOQ cum Un-priced schedule
3.10.3	Tolerance on drum length	(±) 5%
3.10.4	Details of marking on Drum	a) Manufacturer's name or trade make, address & contract no. b) Type of cable & voltage grade. c) Year of manufacture. d) Type of insulation. e) No. of core and sizes of cables. f) Cable code - FRLS. g) Single length of cable on drum. h) Direction of rotation, by arrow. i) Approx. gross mass.(on both sides of drum) j) Drum no. k) 'BHEL-PEM
4.0	<b>INSPECTION/TESTING</b>	
4.1	Type test conduction required	No* (* : Refer Sl. No. 4.2 below)
4.2	Validity of type test report	As per Quality Plan vendor to furnish Type Test Certificate of specified Type Test which has been conducted within period of 10 years i.e. from 03/03/2023 up to 04/03/2013 . These reports should be for the tests conducted on the cable identical in all respects to those proposed to be supplied under this contract and test(s) should have been either conducted at an independent laboratory or should have been witnessed by a client. In absence of valid Type Test report vendor to conduct the same without any commercial & delivery implication to BHEL.
4.3	Acceptance & Routine test	All acceptance and routine tests as per Quality plan shall be carried out. Charges for these shall be deemed to be included in the cable price.



<b>TECHNICAL SPECIFICATION</b> <b>LT PVC CONTROL CABLE</b> LARA STPP ( 2X800 MW)	PE-TS-508-507-E003
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	Rev. No. 00
	Date :09.02.2026

**TECHNICAL DATA - PART - B**  
**(SUPPLIER DATA TO BE FURNISHED AFTER AWARD OF CONTRACT)**

S NO.	PARTICULARS	
1	Name of manufacturer	
2	Place of manufacture	
3	No of cores X Nominal area of conductor (mm <sup>2</sup> )	
4	Cable Type	
5	<b>CONDUCTOR</b>	
	a) Material type & grade	
	b) Shape	
	c) No. of Strands/Diameter of each strand (No. / mm)	
6	<b>HRPVC INSULATION</b>	
	a) Material	
	b) Dielectric strength kv/mm	
	c) Nominal thickness (mm)	
	d) Volume resistivity at 27° C (ohm-cm)	
	e) Volume resistivity at 70° C (ohm-cm)	
	f) Insulation resistance constant at 27° C (M ohm km)	
	g) Insulation resistance constant at 70° C (M ohm km)	
	h) Min. Tensile strength (N/mm <sup>2</sup> )	
	i) Min. Elongation at break (%)	
	j) Negative tolerance on thickness (mm)	
	k) Fictitious dia over insulation (mm)	
	7	<b>FILLERS</b>
a) Material		
8	<b>INNERSHEATH</b>	
	a) Material	
	b) Whether FRLS	
	c) Minimum thickness (mm)	
	d) Colour of inner sheath	
	e) Fictitious dia over inner sheath (mm)	
9	<b>ARMOUR</b>	

NAME OF VENDOR			SEAL	REV.
NAME	SIGNATURE	DATE		



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	a) Material	
	b) Type of armouring	
	c) Nominal size of armour (mm)	
	d) Minimum coverage	
	e) Method of jointing	
	f) Breaking load of joint	
	g) Minimum no. of wires (No.)	
	h) Armour resistance at 20 deg.C (Ohm/km) max	
	i) Max. Resistivity of GS wire (Ohm-cm) max.	
	j) Fictitious dia over Armouring (mm)	
10	<b>OUTERSHEATH</b>	
	a) Material	
	b) Whether FRLS	
	c) Thickness (mm) (Nominal)	
	d) Min. Tensile strength (N/mm <sup>2</sup> )	
	e) Min. Elongation at break (%)	
	f) Colour of Outer sheath	
	g) Tolerance on thickness in mm	
11	Permissible Voltage Variation	
12	Permissible Frequency Variation	
13	Combined Voltage & Frequency Variation	
14	Max. rated Conductor temperature	
15	Max. allowable conductor temperature during short circuit	
16	a. Continuous current carrying capacities	
	b. In Ground 30 deg.C (A)	
	c. In Duct 30 deg.C (A)	
	d. In Air 50 deg.C (A)	
	e. Depth of laying	
	f. Thermal resistivity of soil	
17	<b>FRLS PROPERTIES</b>	
	a. Oxygen Index (ASTMD 2863)	
	b. Temperature Index (ASTMD 2863-77)	
	c. Smoke density rating (ASTMD 2843)	
	d. HCL (ACID) Gas Generation (IEC 754-1)	
	e. Flammability tests	

NAME OF VENDOR			SEAL	REV.	
NAME	SIGNATURE	DATE			



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18	<b>CABLE DRUMS</b>	
	a. Type & construction	
	b. Stranded drum length with tolerance on drum length	
19	Max. D.C. resistance of conductor at 20° C- Main (ohm/km)	
20	Max. A.C. resistance of conductor at 70° C- Main (ohm/km)	
21	Calculated star reactance (ohm/km)	
22	Approx. Cable Capacitance (micro F/km)	
23	Charging current at 415 V (A/km)	
24	Loss tangent (for reference only)	
25	<b>DIAMETERS</b>	
	a. Approx. dia over insulation (mm)	
	b. Approx. dia over inner sheath (mm)	
	c. Fictitious. dia under outer sheath (mm)	
	d. Approx. overall dia of cable (mm)	
	e. Tolerance on overall dia in mm	
26	Minimum bending radius	
27	safe pulling force when pulled by pulling eye N	
28	Approximate weight of cable (kg/km)	
29	Marking at every 5 meter on Outer Sheath by Embossing	
30	Marking at every 1 meter on Outer Sheath by Printing	

NAME OF VENDOR			SEAL	REV.	
NAME	SIGNATURE	DATE			



TECHNICAL SPECIFICATION  
LT PVC CONTROL CABLE  
LARA SUPER THERMAL POWER PROJECT  
STAGE II ( 2X800 MW)

PE-TS-508-507-E003

Issue No: 01

Rev. No. 00

Date :09.02.2026

## QUALITY PLAN

STANDARD QUALITY PLAN स्टैंडर्ड क्वालिटी प्लान		TO BE FILLED IN BY NTPC											
		Item (material, class, grade, rating, range, size etc.) / मद (सामग्री, वर्ग, ग्रेड, रेंज, आकार आदि): <b>1.1 PVC Insulated FRLS Control cables</b>		CONFORMING TO CODE/ कोड के अनुरूप: IS 1554 PART 1 & NTPC TECHNICAL SPECIFICATION)			QP. NO. 0000-999- QOE- S-040 क्यूपी सं.: 0000-999-क्यूओई-एस-040 REV/ संशोधित सं.: 01 DATE / तिथि: 27.08.2021 Page/ पृष्ठ 1 OF/ से 12 VALID UPTO: 26.08.2024		REVIEWED BY AMAN PANDEY AMAN DUBEY S K LAL SUNIL KUMAR LAL NISHITH AGARWAL NISHITH AGRAWAL				
SL. NO क्र.सं	COMPONENT & OPERATIONS अवयव व संचालन	Characteristics/ विशेषताएं	Class /वर्ग	Type of check/जांच के प्रकार	Quantum of check		Reference Document/ संदर्भ दस्तावेज#	Acceptance Norms/ स्वीकृत मानदंड	Record Format/ रिकॉर्ड का प्रारूप	Agency / एजेंसी			Remarks/ टिप्पणियां
					M/ एम	C/N सी/एन				M/ एम	C/ सी	N/ एन	
1	2	3	4	5	6	7	8	9	D*	**	10	11	*

Instructions: 1) Cable manufacturer to maintain records to show co- relation of raw materials to finished cables i.e raw material batch/ lot no. should be traceable to the cable drum.  
2) Cable manufacturer to maintain all quality control records identified as per all QP stages enumerated below whether it is identified for NTPC verification or witness or not.

A	Raw material/ Bought out Items													
1.01	Copper	1.Make	MA	Verify	100%	--	NTPC ACCEPTED SOURCES	NTPC ACCEPTED SOURCES	QCR		V	--	--	
		2. Resistivity	MA	Elect	As per cable mnfr std.	--	IS 613	IS 613	-do--		P	--	--	
1.02	PVC compound for insulation	1. Make	MA	Verify	--do--	100%	MANUFACTURER APPROVED SOURCES	MANUFACTURER APPROVED SOURCES	--do--		V	V	V	
		2. Type/ Grade	MA	Verify	100%	100%	NTPC ADS	NTPC ADS	-do--		V	V	V	
		3. All acceptance test as per manufacturer norms	MA	Verify	As per manufacturer norms	As per manufacturer norms	--do--	--do--	--do--		V	V	V	Refer note 1
1.03	PVC Compound for Inner sheath	1. Make	MA	Verify	--do--	--do--	MANUFACTURER APPROVED SOURCES	MANUFACTURER APPROVED SOURCES	--do--		V	V	V	
		2. Type/ Grade	MA	Verify	--do--	--do--	NTPC ADS	NTPC ADS	--do--		V	V	V	
1.04	Steel wire / Formed Wire ( As applicable )	1. Make	MA	Verify	--do--	--do--	MANUFACTURER APPROVED SOURCES	MANUFACTURER APPROVED SOURCES	--do--		V	V	V	
		2. Dimension	MA	Meas	1 sample from each	--	NTPC APPROVED DATA SHEET & IS 3975	NTPC APPROVED	--do--		P	--	--	

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LEGEND/ संकेतिका: \* RECORDS, IDENTIFIED WITH "TICK" ( ✓ ) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION./ \* "टिक" (✓) के साथ प्रमाणित रिकॉर्ड, क्यूए दस्तावेजीकरण में आपूर्तिकर्ता द्वारा अनिवार्य रूप से शामिल किया जाएगा।  
 \*\* M: MANUFACTURER/SUB-SUPPLIER/निर्माता / उप-आपूर्तिकर्ता C: MAIN CONTRACTOR/ मुख्य संविदाकार, N: NTPC/ एनटीपीसी P: PERFORM/ निष्पादन W: WITNESS/ गवाह AND V: VERIFICATION. AS APPROPRIATE/ सत्यापन (जैसा उपयुक्त हो), CHP/ सीएचपी: NTPC SHALL IDENTIFY IN COLUM "N" AS "W".: एनटीपीसी खंड "N" में "W" के रूप में करेगा।

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प्रारूप सं.

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STANDARD QUALITY PLAN स्टैंडर्ड क्वालिटी प्लान		TO BE FILLED IN BY NTPC											
Item (material, class, grade, rating, range, size etc.) / मद् (सामग्री, वर्ग, ग्रेड, रैंकिंग, रेंज, आकार आदि): <b>1.1 PVC Insulated FRLS Control cables</b>		CONFORMING TO CODE/ कोड के अनुरूप: IS 1554 PART 1 & NTPC TECHNICAL SPECIFICATION)			QP. NO. 0000-999- QOE- S-040 क्यूपी सं.: 0000-999-क्यूओई-एस-040 REV/ संशोधित सं.: 01 DATE / तिथि: 27.08.2021 Page/ पृष्ठ 2 OF/ से 12 VALID UPTO: 26.08.2024			REVIEWED BY AMAN PANDEY AMAN DUBEY SUNIL KUMAR LAL NISHITH AGARWAL NISHITH AGRAWAL		APPROVED BY अनुमोदित Approved N.T.P.C., ROHTA			
SL. NO क्र.सं	COMPONENT & OPERATIONS अवयव व संचालन	Characteristics/ विशेषताएं	Class /वर्ग	Type of check/जांच के प्रकार	Quantum of check		Reference Document/ संदर्भ दस्तावेज#	Acceptance Norms/ स्वीकृत मानदंड	Record Format/ रिकॉर्ड का प्रारूप	Agency / एजेंसी			Remarks/ टिप्पणियां
					M/ एम	C/N सी/एन				M/ एम	C/ सी	N/ एन	
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SL. NO	COMPONENT & OPERATIONS	Characteristics/ विशेषताएं	Class /वर्ग	Type of check/जांच के प्रकार	Quantum of check		Reference Document/ संदर्भ दस्तावेज#	Acceptance Norms/ स्वीकृत मानदंड	Record Format/ रिकॉर्ड का प्रारूप	Agency / एजेंसी			Remarks/ टिप्पणियां	
					M/ एम	C/N सी/एन				M/ एम	C/ सी	N/ एन		
		3. All acceptance tests as per IS 3975	MA	Verify	As per IS 3975	--	IS 3975	IS 3975	Supplier TC		V	V	--	
1.05	PVC compound for Sheath	1. Make	MA	Verify	As per manufacturer norms	100%	MANUFACTURER APPROVED SOURCES	MANUFACTURER APPROVED SOURCES	QCR		V	V	V	
		2. Type / Grade	MA	Verify	100%	100%	NTPC ADS	NTPC ADS	--do--		V	V	V	
		3. All acceptance test as per manufacturer norms	MA	Verify	As per manufacturer norms	As per manufacturer norms	--do--	--do--	--do--		V	V	V	Refer note 1
		4. Thermal Stability	MA	Chem	One sample / Batch	--	NTPC ADS	NTPC ADS	QCR		P	--	--	
		5. Oxygen Index	MA	Chem	--do--	--	NTPC ADS/ IS 10810 Part 58	NTPC ADS/ IS 10810 Part 58	--do--		P	--	--	
		6. Acid Gas Emission	MA	Chem	--do--	--	NTPC ADS / IEC60754	NTPC ADS / IEC60754	--do--		P	--	--	
1.06	Wooden Drum	1. Dimension	MI	Meas	Manuf. Std.	--	IS 10418	IS10418	QCR		P	--	--	
		2. Anti termite treatment	MI	Chem	Cable manuf. std	--	CABLE MANUF. STD.	CABLE MANUF. STD.	COC		V	V	V	COC from drum manuf.
1.07	Steel Drum	1. Dimension	MI	Meas	--do--	--	--do--	--do--	QCR		P	--	--	
		2. Surface finish	MI	Meas	--do--	--	--do--	--do--	--do--		P	--	--	
<b>B Process &amp; Stage Inspection</b>														
2.01	Wire Drawing	1.Surface finish	MA	Visual	One	--	SHOULD BE SMOOTH &	SHOULD BE	QCR		P	--	--	

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\*\* M: MANUFACTURER / SUB-SUPPLIER / निर्माता / उप-आपूर्तिकर्ता C: MAIN CONTRACTOR / मुख्य संविदाकार, N: NTPC/एनटीपीसी P: PERFORM/निष्पादन W: WITNESS/गवाह AND V: VERIFICATION. AS APPROPRIATE/सत्यापन (जैसा उपयुक्त हो), CHP/सीएचपी: NTPC SHALL IDENTIFY IN COLUMN "N" AS "W": एनटीपीसी खंड "N" में "W" के रूप में करेगा।

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SL. NO क्र.सं	COMPONENT & OPERATIONS अवयव व संचालन	Characteristics/ विशेषताएं	Class /वर्ग	Type of check/जांच के प्रकार	Quantum of check		Reference Document/ संदर्भ दस्तावेज#	Acceptance Norms/ स्वीकृत मानदंड	Record Format/ रिकॉर्ड का प्रारूप	Agency / एजेंसी			Remarks/ टिप्पणियां
					M/ एम	C/N सी/एन				M/ एम	C/ सी	N/ एन	
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				sample/Settling of each size	FREE FROM SCRATCHES	SMOOTH & FREE FROM SCRATCHES							
		2. Wire Diameter	MA	Meas	--do--	--	NTPC ADS	NTPC ADS	--do--	P	--	--	
		3. Annealing Test	CR	Mech	--do--	Same as 6M	IS8130/NTPC ADS	IS8130/NTPC ADS	--do--	P	V	V	Refer Sl. No. 3.03(iii).
2.02	Bunching / stranding	1. No. of wires	MA	Meas	--do--	--	NTPC ADS	NTPC ADS	--do--	P	--	--	
		2. Dia of wire	MA	Meas	--do--	--	--do--	--do--	--do--	P	--	--	
		3. Dimension of Conductor	MA	Meas	--do--	--	--do--	--do--	--do--	P	--	--	
		4. Direction of lay	MA	Visual	--do--	--	--do--	--do--	--do--	P	--	--	
		5. Records of strand breakage / welding during conductor stranding	MA	Verify	--do--	--	IS 8130	IS8130	--do--	P	--	--	
		6. Surface finish	MA	Visual	--do--	--	--do--	--do--	--do--	P	--	--	
		7. DC Resistance	CR	Meas	--do--	--	IS8130/NTPC ADS	IS8130/NTPC ADS	--do--	P	--	--	
2.03	Insulation extrusion	1. Surface finish	MA	Visual	--do--	--	NTPC spec	SHOULD BE SMOOTH. NO POROSITY IS PERMITTED.	--do--	P	--	--	PVC compound shall be preferably loaded in to extruder by suction method.
		2. Colour of cores	MA	Visual	--do--	--	NTPC ADS	NTPC ADS	--do--	P	--	--	

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\*\* M: MANUFACTURER/SUB-SUPPLIER/निर्माता / उप-आपूर्तिकर्ता C: MAIN CONTRACTOR/मुख्य संविदाकार, N: NTPC/एनटीपीसी P: PERFORM/निष्पादन W: WITNESS/गवाह AND V: VERIFICATION. AS APPROPRIATE/सत्यापन (जैसा उपयुक्त हो), CHP/सीएचपी: NTPC SHALL IDENTIFY IN COLUM "N" AS "W": एनटीपीसी खंड "N" में "W" के रूप में करेगा।

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प्रारूप सं.

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STANDARD QUALITY PLAN स्टैंडर्ड क्वालिटी प्लान		TO BE FILLED IN BY NTPC													
		CONFORMING TO CODE/ कोड के अनुरूप: IS 1554 PART 1 & NTPC TECHNICAL SPECIFICATION				QP. NO. 0000-999- QOE- S- 040 क्यूपी सं.: 0000-999-क्यूओई -एस-040 REV/ संशोधित सं.: 01 DATE / तिथि: 27.08.2021 Page/ पृष्ठ 4 OF/ से 12 VALID UPTO: 26.08.2024			REVIEWED BY AMAN PANDEY AMAN DUBEY S K LAL SUNIL KUMAR LAL NISHITH AGARWAL NISHITH AGRAWAL			APPROVED BY 			
Item (material, class, grade, rating, range, size etc.) / मद् (सामग्री, वर्ग, ग्रेड, रैंकिंग, रेंज, आकार आदि): <b>1.1 PVC Insulated FRLS Control cables</b>															
SL. NO क्र.सं	COMPONENT & OPERATIONS अवयव व संचालन	Characteristics/ विशेषताएं	Class वर्ग	Type of check/जांच के प्रकार	Quantum of check		Reference Document/ संदर्भ दस्तावेज#	Acceptance Norms/ स्वीकृत मानदंड	Record Format/ रिकॉर्ड का प्रारूप	Agency / एजेंसी			Remarks/ टिप्पणियां		
					M/ एम	C/N सी/एन				M/ एम	C/ सी	N/ एन			
1	2	3	4	5	6	7	8	9	D*	**	10	11			

		3.Core identification	MA	Visual	One sample/Settling of each size	--	NTPC ADS	NTPC ADS	QCR		P	--	---	Core printing shall be legible & indelible
		4.Thickness	CR	Meas	--do--	--	--do--	--do--	--do--		P	--	--	
		5.Spark Test	CR	Elect	100%	100%	CABLE MANUF. STD.	No FAILURE	QCR		P	V	V	1.Spark test failure record is to be verified. 2.Core repairing not permitted
2.04	Laying up	1. Core sequence	MA	Visual	One sample/Settling of each size	--	IS 1554 (Part I)	IS 1554 (Part I)	--do--		P	--	--	
		2. Direction of lay	MA	Visual	--do--	--	--do--	--do--	--do--		P	--	--	
		3. Dia over laid up core	MA	Meas	--do--	--	NTPC ADS	NTPC ADS	--do--		P	--	--	
2.05	Inner Sheath	1.Colour	MA	Visual	--do--	-	--do--	--do--	--do--		P	--	--	
		2. Surface Finish	MA	Visual	100%	-	NTPC SPECIFICATION	FISH EYE, BLOW HOLE NOT PERMITTED	--do--		P	--	-	
		3.Thickness	MA	Meas	One sample/Settling of each size	-	NTPC ADS	NTPC ADS	--do--		P	--	--	
		4.Dia over inner sheath	MI	Meas	--do--	-	--do--	--do--	--do--		P	--	--	

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\*\* M: MANUFACTURER/SUB-SUPPLIER/निर्माता / उप-आपूर्तिकर्ता C: MAIN CONTRACTOR/मुख्य संविदाकार, N: NTPC/एनटीपीसी P: PERFORM/निष्पादन W: WITNESS/गवाह AND V: VERIFICATION. AS APPROPRIATE/सत्यापन (जैसा उपयुक्त हो), CHP/सीएचपी: NTPC SHALL IDENTIFY IN COLUMN "N" AS "W": एनटीपीसी खंड "N" में "W" के रूप में करेगा।

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STANDARD QUALITY PLAN स्टैंडर्ड क्वालिटी प्लान		TO BE FILLED IN BY NTPC											
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SL. NO क्र.सं	COMPONENT & OPERATIONS अवयव व संचालन	Characteristics/ विशेषताएं	Class /वर्ग	Type of check/जांच के प्रकार	Quantum of check		Reference Document/ संदर्भ दस्तावेज#	Acceptance Norms/ स्वीकृत मानदंड	Record Format/ रिकॉर्ड का प्रारूप	Agency / एजेंसी			Remarks/ टिप्पणियां
					M/ एम	C/N सी/एन				M/ एम	C/ सी	N/ एन	
1	2	3	4	5	6		7	8	9	D*	**	10	11

2.06	Armouring ( As Applicable)	1.Dimension	MA	Meas	--do--	-	--do--	--do--	--do--		P	--	--	
		2.No. of wires / strip	MA	Meas.	--do--	-	--do--	--do--	--do--		P	--	--	
		3. Direction of lay	MA	Visual	One sample/Setting of each size	--	IS 1554 (Part 1)	IS 1554 (Part 1)	QCR		P	--	--	
		4.Coverage & Quality of armouring	MA	Meas.	100%	--	Min. area of coverage of armouring shall be 90%. The gap between amour wires / formed wires shall not exceed one amour wire/ formed wire space & there shall be no cross over/ over riding of amour wire / formed wire. Zn rich paint shall be applied on amour joint surface of G.S. Wire /formed wire. The breaking load of amour wire joint shall not be less than 95% of that amour wire / formed wire. (As per NTPC specification)	--do--			P	--	--	
		5 Dia over armouring	MA	Meas.	One sample/Setting of each size	--	NTPC ADS	NTPC ADS	--do--		P	--	--	
2.07	Outer Sheath	1. Surface finish	MA	Visual	100%	--	Pimple, Fish Eye, Burnt particles, Blow Hole not permitted. Repairing on outer sheath not permitted. (As per NTPC specification)	QCR			P	--	--	PVC FRLS compound shall be preferably loaded in to extruder by suction method.

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SL. NO क्र.सं	COMPONENT & OPERATIONS अवयव व संचालन	Characteristics/ विशेषताएं	Class /वर्ग	Type of check/जांच के प्रकार	Quantum of check		Reference Document/ संदर्भ दस्तावेज#	Acceptance Norms/ स्वीकृत मानदंड	Record Format/ रिकॉर्ड का प्रारूप	Agency / एजेंसी			Remarks/ टिप्पणियां
					M/ एम	C/N सी/एन				M/ एम	C/ सी	N/ एन	
1	2	3	4	5	6	7	8	9	D*	**	10	11	

		2.Colour of sheath	MA	Visual	One sample/Setting of each size	-	NTPC ADS	NTPC ADS	QCR		P	--	--	
		3. Dia over outer sheath	MA	Meas	--do--	-	--do--	--do--	--do--		P	--	--	
		4.Thickness of outer sheath	CR	Meas	--do--	-	--do--	--do--	--do--		P	--	--	
		5. Embossing quality	MA	Visual	100%	-	Drum No. IS 1554( Part 1) Cable size, Voltage grade & Words "FRLS" at every 5 meter is to be embossed. Embossing shall be automatic, in line & marking shall be legible & indelible. (As per NTPC specification)	--do--	--do--		P	--	--	Drum No. on Cable may be embossed/printed
		6. Sequential marking	MA	Visual	Full length	--	Sequential marking of length of cable in meter at every one meter is to be embossed / printed. Embossing / printing shall be progressive, automatic in line & marking shall be legible & indelible. ( As per NTPC specification ) In addition, Drum No. is also to be embossed/printed on full cable length	--do--	--do--		P	--	--	
<b>C</b>		<b>Finished Cables</b>												
3.01	Type test reports clearance from NTPC Engineering	All type tests as per NTPC specification	CR	Doc.	100%	100%	NTPC SPECIFICATION / NTPC ADS / IS 1554 (Part I)	NTPC SPECIFICATION / NTPC ADS / IS 1554 (Part I)	QCR	✓	P	V	V	
3.02	Routine Tests	1.High Voltage test	CR	Elect	100%	100%	NTPC ADS / IS 1554 (Part I)	NTPC ADS / IS	Test	✓	P	W	V	Refer note 2

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VERIFICATION. AS APPROPRIATE/ सत्यापन (जैसा उपयुक्त हो), CHF/ सीएचपी: NTPC SHALL IDENTIFY IN COLUM "N" AS "W": एनटीपीसी अंड "N" में "W" के रूप में करेगा।

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SL. NO क्र.सं	COMPONENT & OPERATIONS अवयव व संचालन	Characteristics/ विशेषताएं	Class /वर्ग	Type of check/जांच के प्रकार	Quantum of check		Reference Document/ संदर्भ दस्तावेज#	Acceptance Norms/ स्वीकृत मानदंड	Record Format/ रिकॉर्ड का प्रारूप	Agency / एजेंसी			Remarks/ टिप्पणियां
					M/ एम	C/ N सी/एन				M/ ए म	C/ सी	N/ एन	
1	2	3	4	5	6	7	8	9	D*	**	10	11	

		at room temperature						1554 (Part I)	certificat c				
		2.Conductor Resistance	CR	Elect	100%	100%	NTPC ADS / IS 1554 (Part I)	NTPC ADS / IS 1554 (Part I)	--do--	✓	P	W	V
<b>3.03</b>	<b>Acceptance Tests</b>												
3.03 (i)	Construction of finished Cable	1. OD of Cable	MA	Meas.	Each type & size of cables as per sampling plan of IS 1554 (Part 1)		NTPC ADS	NTPC ADS	--do--	✓	P	W	W
		2. Laying of core	CR	Visual	--do--		NTPC ADS / IS 1554 (Part I)	NTPC ADS / IS 1554 (Part I)	Test certific c	✓	P	W	W
		3. Core Identification	CR	Visual	--do--		--do--	--do--	--do--	✓	P	W	W
		4. Colour of outer sheath	MA	Visual	--do--		NTPC ADS	NTPC ADS	--do--	✓	P	W	W
		5. Inner sheath thickness	CR	Meas	- do -		--do--	--do--	--do--	✓	P	W	W
		6. Inner sheath colour	MA	Visual	- do -		- do -	- do -	--do--	✓	P	W	W
3.03 (ii)	Armour wires/ Formed wires (if applicable)	1.Dimensions	CR	Meas	Each type & size of cables as per sampling plan of IS 1554 (Part 1)		NTPC ADS /IS1554(Part I)/IS3975	NTPC ADS /IS1554(Part I)/IS3975	--do--	✓	P	V	V
		2. No. of wires/ formed wire	CR	Mech	- do -		--do--	--do--	--do--	✓	P	V	V

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1	2	3	4	5	6	7	8	9	D*	**	10		11

		3. Tensile test	CR	Mech	--do--	--do--	--do--	--do--	✓	P	V	V	
		4. Elongation test	CR	Mech	--do--	--do--	--do--	--do--	✓	P	V	V	
		5. Torsion test ( for round wires only)	CR	Mech	--do--	--do--	--do--	--do--	✓	P	V	V	
		6. Wrapping test	CR	Mech	--do--	--do--	--do--	--do--	✓	P	V	V	
		7. Resistance test	CR	Mech	--do--	--do--	--do--	--do--	✓	P	V	V	
		8. Mass of Zinc coating	CR	Meas	--do--	--do--	--do--	--do--	✓	P	V	V	
		9. Uniformity of Zinc Coating	CR	Chem.	--do--	--do--	--do--	--do--	✓	P	V	V	
		10. Adhesion test	CR	Mech	--do--	--do--	--do--	--do--	✓	P	V	V	
		11. Freedom from defects	CR	Visual	--do--	--do--	--do--	--do--	✓	P	V	V	
3.03 (iii)	Conductor	1. Annealing Test	CR	Mech	--do--	NTPC ADS/ IS 8130	NTPC ADS/ IS 8130	--do--	✓	P	V	V	Refer Sl. No. 2.01
		2. Resistance Test	CR	Elect	--do--	--do--	--do--	--do--	✓	P	W	W	
3.03 (iv)	PVC Insulation & PVC Sheath	1. Thickness of insulation & sheath	CR	Meas.	--do--	NTPC ADS/ IS 1554(PartI)	NTPC ADS/ IS 1554(PartI)	--do--	✓	P	W	W	
		2. Tensile strength & elongation at break of insulation & outer sheath	CR	Mech	--do--	--do--	NTPC ADS/ IS 1554(PartI)	--do--	✓	P	W	W	
		3. Tensile strength & elongation of PVC at break of insulation & outer	CR	Mech	One sample per batch of offered lot (Finished Cable) irrespective of sizes	NTPC ADS/ IS 1554(PartI)	NTPC ADS/ IS 1554(PartI)	Test certificate	✓	P	V	V	MTR of the offered lot shall be verified

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STANDARD QUALITY PLAN स्टैंडर्ड क्वालिटी प्लान		TO BE FILLED IN BY NTPC											
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SL. NO क्र.सं	COMPONENT & OPERATIONS अवयव व संचालन	Characteristics/ विशेषताएं	Class /वर्ग	Type of check/जांच के प्रकार	Quantum of check		Reference Document/ संदर्भ दस्तावेज#	Acceptance Norms/ स्वीकृत मानदंड	Record Format/ रिकॉर्ड का प्रारूप	Agency / एजेंसी			Remarks/ टिप्पणियां
					M/ एम	C/N सी/एन				M/ एम	C/ सी	N/ एन	
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		sheath (Ageing Test )											
		4. Insulation resistance (Volume resistivity method)	CR	Elect	Each type & size of cables as per sampling plan of IS 1554 ( Part 1)	--do--	NTPC ADS/ IS 1554(PartI)	--do--	✓	P	W	W	
		5.High voltage test at room temperature	CR	Elect	--do--	--do--	--do--	--do--	✓	P	W	W	
		6.Thermal stability on PVC Insulation and outer sheath	CR	Chem	One sample of each offered lot of all offered sizes	-do-	-do-	-do-	✓	P	W	W	
		7.Oxygen index Test on outer sheath	CR	Chem	--do--	NTPC ADS / IS10810 Part 58	NTPC A.D.S	Test certificac	✓	P	W	W	Refer Note 3
		8.Smoke density rating test on outer sheath	CR	Chem	--do--	NTPC ADS & ASTMD2843	NTPC ADS	-do--	✓	P	W	W	Refer Note 3
		9.Acid gas generation test on outer sheath	CR	Chem	--do--	NTPC ADS & IEC 60754-1	NTPC ADS	--do--	✓	P	W	W	Refer Note 3
		10.Flammability test on completed cable	CR	Chem	Refer Note 4	Refer Note 4	NTPC ADS & IEC 60332 Part-3 ( Category-B)	NTPC ADS	--do--	✓	P	W	W

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 \*\* M: MANUFACTURER/SUB-SUPPLIER/निर्माता / उप-आपूर्तिकर्ता C: MAIN CONTRACTOR/ मुख्य संविदाकार, N: NTPC/ एनटीपीसी P: PERFORM/ निष्पादन W: WITNESS/ गवाह AND V: VERIFICATION. AS APPROPRIATE/ सत्यापन (जैसा उपयुक्त हो), CHP/ सीएचपी: NTPC SHALL IDENTIFY IN COLUMN "N" AS "W": एनटीपीसी खंड "N" में "W" के रूप में करेगा।

STANDARD QUALITY PLAN स्टैंडर्ड क्वालिटी प्लान		TO BE FILLED IN BY NTPC													
 Item (material, class, grade, rating, range, size etc.) / मद (सामग्री, वर्ग, ग्रेड, रैंकिंग, रेंज, आकार आदि): <b>1.1 PVC Insulated FRLS Control cables</b>		CONFORMING TO CODE/ कोड के अनुरूप: <b>IS 1554 PART 1 &amp; NTPC TECHNICAL SPECIFICATION</b>				QP. NO. 0000-999- QOE- S-040 क्यूपी सं.: 0000-999-क्यूओई-एस-040 REV/ संशोधित सं.: 01 DATE : तिथि: 27.08.2021 Page/ पृष्ठ 10 OF/ से 12 VALID UPTO: 26.08.2024			REVIEWED BY AMAN PANDEY AMAN DUBEY SUNIL KUMAR LAL NISHITH AGARWAL NISHITH AGRAWAL						
SL. NO क्र.सं	COMPONENT & OPERATIONS अवयव व संचालन	Characteristics/ विशेषताएं	Class /वर्ग	Type of check/जांच के प्रकार	Quantum of check		Reference Document/ संदर्भ दस्तावेज#	Acceptance Norms/ स्वीकृत मानदंड	Record Format/ रिकॉर्ड का प्रारूप	Agency / एजेंसी			Remarks/ टिप्पणियां		
					M/ एम	C/ N सी/एन				M/ एम	C/ सी	N/ एन			
1	2	3	4	5	6	7	8	9	D*	**	10	11			

		11. Surface finish & length measurement.	CR	Visual & Meas	100% (COC from Manufacturer to be submitted for surface finish as per specification's requirement)	one length of each offered lot of 50 drums of all sizes	(1) IS1554 Part-I (2) Cable size, Voltage grade & Words "FRLS" at every 5 meter is to be embossed. Embossing shall be automatic, in line & marking shall be legible & indelible. (3) Sequential marking of length of cable in meter at every one meter is to be embossed / printed. Embossing / printing shall be progressive, automatic, in line & marking shall be legible & indelible (4) drum / Batch number marking on outer sheath	--do--	✓	P	W	W	Pimple, Fish Eye, Burnt particles, Blow Hole etc. not permitted. Repairing on outer sheath not permitted.	
		12. Sequence of cores armour coverage, gap between two consecutive armour/ formed wire	CR	Visual & Meas	One length of each size	One length of each size	Min. area of coverage of armouring shall be 90%. The gap between armour wires / formed wires shall not exceed one armour wire/ formed wire space & there shall be no cross over/ over riding of armour wire / formed wire. Zn rich paint shall be applied on armour joint surface of G.S. Wire /formed wire	--do--	✓	P	W	W		
4	Packing	1. Sealing	MA	Visual	100%	100%	(1) IS 1554 (Part-I) (2) The surface of the drum and the outer most cable layer shall be covered with water proof cover. (3) Both the ends of cables shall be properly sealed with heat shrinkable PVC/ rubber caps secured by "U" nails.	QCR	✓	P	--	--		
4.01	Identification	NTPC Sealing	MA	Visual	100%	100%	Sealing shall be visible	Sealing shall be visible	--do--	✓	P	V	V	

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LEGEND/ संकेतिका: \* RECORDS, IDENTIFIED WITH "TICK" (✓) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION / \* "टिक" (✓) के साथ प्रमाणित रिकॉर्ड, क्यूए दस्तावेजीकरण में आपूर्तिकर्ता द्वारा अनिवार्य रूप से शामिल किया जाएगा।  
 \*\* M: MANUFACTURER / SUB-SUPPLIER / निर्माता / उप-आपूर्तिकर्ता C: MAIN CONTRACTOR / मुख्य संविदाकार, N: NTPC/ एनटीपीसी P: PERFORM/ निष्पादन W: WITNESS/ गवाह AND V: VERIFICATION. AS APPROPRIATE/ सत्यापन (जैसा उपयुक्त हो), CHP/ सीएचपी: NTPC SHALL IDENTIFY IN COLUMN "N" AS "W": एनटीपीसी खंड "N" में "W" के रूप में करेगा।

Format No.: QS-01-QAI-P-07A/F3-R0

प्रारूप सं.

Engg. Div./QA&I

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STANDARD QUALITY PLAN स्टैंडर्ड क्वालिटी प्लान		TO BE FILLED IN BY NTPC												
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SL. NO क्र.सं	COMPONENT & OPERATIONS अवयव व संचालन	Characteristics/ विशेषताएं	Class /वर्ग	Type of check/जांच के प्रकार	Quantum of check		Reference Document/ संदर्भ दस्तावेज#	Acceptance Norms/ स्वीकृत मानदंड	Record Format/ रिकॉर्ड का प्रारूप	Agency / एजेंसी			Remarks/ टिप्पणियां	
					M/ एम	C/N सी/एन				M/ एम	C/ सी	N/ एन		
1	2	3	4	5	6	7	8	9	D*	**	10	11		

Notes:	
1)	If the compound manufacturer is carrying out Ageing test, test report of compound manufacturer is to be reviewed. If the compound manufacturer is not carrying out ageing test, then cable manufacturer is to carry out ageing test & test report is to be reviewed ( quantum of ageing test sample shall be one sample /batch )
2)	2(a) In case of manufacturers / supplier who have supplied cables in the past through Corporate Centre:- Routine Test of manufacturer internal test report are to be verified by NTPC at the time of final inspection. 2(b) In case of manufacturers / supplier WHO HAVE NOT SUPPLIED cables in the past through Corporate Centre:- Routine Test are to be witnessed by Main Contractor on 100% basis. This is in addition to manufacturer internal test report to be verified by NTPC at the time of final inspection. Same is to be verified by NTPC
3)	1. For Smoke Density rating test: if the test result without conditioning is within (-)10% of the maximum specified value, then, retesting is to be carried out with conditioning of samples as per standard and the test results after conditioning shall be final for acceptance/rejection. 2. For Acid Gas Generation test: if the test result without conditioning is within (-)10% of the maximum specified value, then, retesting is to be carried out with conditioning of samples as per standard and the test results after conditioning shall be final for acceptance/rejection.

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 \*\* M: MANUFACTURER/ SUB-SUPPLIER/ निर्माता / उप-आपूर्तिकर्ता C: MAIN CONTRACTOR/ मुख्य संविदाकार, N: NTPC/ एनटीपीसी P: PERFORM/ निष्पादन W: WITNESS/ गवाह AND V: VERIFICATION. AS APPROPRIATE/ सत्यापन (जैसा उपयुक्त हो), CHP/ सीएचपी: NTPC SHALL IDENTIFY IN COLUM "N" AS "W": एनटीपीसी खंड "N" में "W" के रूप में करेगा ।

NTPC		STANDARD QUALITY PLAN स्टैंडर्ड क्वालिटी प्लान				TO BE FILLED IN BY NTPC							
Item (material, class, grade, rating, range, size etc.) / मद् (सामग्री, वर्ग, ग्रेड, रैंकिंग, रेंज, आकार आदि): <b>1.1 PVC Insulated FRLS Control cables</b>		CONFORMING TO CODE/ कोड के अनुरूप: IS 1554 PART 1 & NTPC TECHNICAL SPECIFICATION)				QP. NO. 0000-999- QOE- S-040 क्यूपी सं.: 0000-999-क्यूओई-एस-040 REV/ संशोधित सं...01 DATE / तिथि: 27.08.2021 Page/ पृष्ठ 12 OF/ से 12 VALID UPTO: 26.08.2024		REVIEWED BY AMAN PANDEY AMAN DUBEY S K LAL SUNIL KUMAR LAL NISHITH AGARWAL NISHITH AGRAWAL					
SL. NO क्र.सं	COMPONENT & OPERATIONS अवयव व संचालन	Characteristics/ विशेषताएं	Class /वर्ग	Type of check/जांच के प्रकार	Quantum of check		Reference Document/ संदर्भ दस्तावेज#	Acceptance Norms/ स्वीकृत मानदंड	Record Format/ रिकॉर्ड का प्रारूप	Agency / एजेंसी			Remarks/ टिप्पणियां
					M/ एम	C/N सी/एन				M/ ए	C/ सी	N/ एन	
1	2	3	4	5	6	7	8	9	D*	**	10	11	

	3. For Oxygen Index test: if the test result without conditioning is within (+)7% of the minimum specified value, then, retesting is to be carried out with conditioning of samples as per standard and the test results after conditioning shall be final for acceptance/rejection.
	4. In case the test results without conditioning do not meet the maximum/minimum specified value, the manufacturer may exercise the option of retesting the samples after conditioning as per standard.
4)	This test will be carried out using composite sampling i.e. irrespective of size; cables of one particular type (i.e. armoured, unarmoured) will be bunched together, as per calculations in line with the IEC. All sizes of armoured & unarmoured cables shall be covered.
LEGEND:	NTPC ADS: NTPC approved data sheet, QCR: quality control records of cable manufacturer, CABLE MANUF STD- cable manufacturer's internal plant standard, MI: minor, MA: major, CR: critical, COC- certificate of conformance

LEGEND/ संकेतिका: \* RECORDS, IDENTIFIED WITH "TICK" (Ö) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION/ \* "टिक" (..) के साथ प्रमाणित रिकॉर्ड, क्यूए दस्तावेजीकरण में आपूर्तिकर्ता द्वारा अनिवार्य रूप से शामिल किया जाएगा।

\*\* M: MANUFACTURER/SUB-SUPPLIER/निर्माता / उप-आपूर्तिकर्ता C: MAIN CONTRACTOR/मुख्य संविदाकार, N: NTPC/एनटीपीसी P: PERFORM/निष्पादन W: WITNESS/गवाह AND V: VERIFICATION. AS APPROPRIATE/सत्यापन (जैसा उपयुक्त हो), CHP/सीएचपी: NTPC SHALL IDENTIFY IN COLUM "N" AS "W": एनटीपीसी खंड "N" में "W" के रूप में करेगा।

	<b>ANNEXURE-A TO QP</b>	CUSTOMER:	PROJECT TITLE	SPECIFICATION NUMBER:
		BIDDER/VENDOR:	QUALITY PLAN NUMBER: PE-QP-999-507-E003	SPECIFICATION TITLE:
	SHEET 1 OF 3	SYSTEM: CABLE	ITEM: 1. LT PVC CONTROL CABLE	DOC. NO.

## TYPE/ ACCEPTANCE/ ROUTINE TEST REQUIREMENTS

### A. Type Test Conduction (For applicability, please refer clause no. 4.2 of Technical Data Part-A):

- Tests for which "T" is indicated in the 'Test Conduction Required As' column below shall be conducted as Type Test.
- Sampling:
  - Type test to be conducted on one size for each type (Al/Cu conductor) of cable.
  - FRLS & Flammability Test to be conducted only on one sample.
- Repeat type test(s) are not required, in case the requirements of note no. 2, clause no. 2.2 of IS 1554-1 (as per amendment no. 5 of 2012) are met.

### B. Acceptance Test Conduction:

- Tests for which "A" is indicated in the 'Test Conduction Required As' column below shall be conducted as Acceptance tests.
- Sampling:  
Sampling for acceptance tests shall be as per Appendix-B of IS: 1554 Part-I.
- Flammability Test to be conducted only on one sample.

### C. Routine Test Conduction:

- Tests for which "R" is indicated in the 'Test Conduction Required As' column below shall be conducted as Routine tests.

### D. Tests listed in S. No-7.0 & 8.0 shall be conducted only on one sample.

<u>S. No.</u>	<u>TEST</u>	<u>APPLICABLE FOR</u>	<u>TEST CONDUCTION REQUIRED AS</u>	<u>REFERENCE STANDARD</u>	<u>REMARKS</u>
<b>1.0</b>	<b>Tests for Conductor</b>				
I.	Annealing test	For copper conductor only	T, A	IS 10810 Pt 1	Internal in process Test Report to be furnished for to inspector at the time of inspection
II.	Tensile test	For aluminium conductor only (Not applicable for compacted circular or shaped conductor)	T, A	IS 10810 Pt 2	
III.	Wrapping test	For aluminium conductor only (Not applicable for compacted circular or shaped conductor)	T, A	IS 10810 Pt 3	
IV.	Resistance test	For Al/Cu	T, A, R	IS 10810 Pt 5	
<b>2.0</b>	<b>Tests for Armour Wires/Strips</b>				

	<b>ANNEXURE-A TO QP</b>	CUSTOMER:	PROJECT TITLE	SPECIFICATION NUMBER:
		BIDDER/VENDOR:	QUALITY PLAN NUMBER: PE-QP-999-507-E003	SPECIFICATION TITLE:
	SHEET 2 OF 3	SYSTEM: CABLE	ITEM: 1. LT PVC CONTROL CABLE	DOC. NO.

<b>S. No.</b>	<b>TEST</b>	<b>APPLICABLE FOR</b>	<b>TEST CONDUCTION REQUIRED AS</b>	<b>REFERENCE STANDARD</b>	<b>REMARKS</b>
I.	Measurement of dimensions	Applicable for Aluminium wire & GS wire/Strip	T, A	IS 10810 Pt 36	
II.	Tensile test	Applicable for Aluminium wire & GS wire/Strip	T, A	IS 10810 Pt 37	
III.	Elongation at break test	Applicable for GS wire/Strip only	T, A	IS 10810 Pt 37	
IV.	Torsion test	For GS round wire only	T, A	IS 10810 Pt 38	
V.	Winding / Adhesion Test	For GS strip only	T, A	IS 10810 Pt 39	
VI.	Resistivity test	Applicable for Aluminium wire & GS wire	T, A	IS 10810 Pt 42	
VII.	Uniformity of Zinc coating test	For G. S. wires/Strip only	T, A	IS 10810 Pt 40	
VIII.	Mass of Zinc coating test	For G. S. wires/Strip only	T, A	IS 10810 Pt 41	
IX.	Wrapping Test	Applicable for Aluminium wire & GS wire	A	IS 10810 Pt 3	
<b>3.0</b>	<b><u>Physical Tests for PVC Insulation &amp; PVC sheath</u></b>				
I.	Test for thickness	Applicable for PVC insulation, PVC inner sheath & PVC outer sheath	T, A	IS 10810 Pt 6	
II.	Tensile strength and elongation test at break	Applicable for PVC insulation & PVC outer sheath			
(a)	Before ageing		T, A	IS 10810 Pt 7	
(b)	After ageing		T, A	IS 10810 Pt 7	
III.	Ageing in air oven	Applicable for PVC insulation & PVC outer sheath	T	IS 10810 Pt 11	
IV.	Loss of mass in air oven test	For PVC outer sheath only	T	IS 10810 Pt 10	
V.	Hot deformation test	For PVC outer sheath only	T, A	IS 10810 Pt 15	
VI.	Heat shock test	For PVC outer sheath only	T	IS 10810 Pt 14	
VII.	Shrinkage test	For PVC insulation & PVC outer sheath only	T	IS 10810 Pt 12	
VIII.	Thermal stability test	For PVC insulation & PVC outer sheath only	T, A	IS 10810 Pt 60	
<b>4.0</b>	<b><u>Improved Fire performance (FR-LSH) Tests</u></b>				
I.	Oxygen index test	<i>For outer sheath only</i>	T, A	IS 10810 Pt 58 / ASTM D 2863/	
II.	Smoke density test	<i>For outer sheath only</i>	T, A	IS 10810 Pt 63 / ASTM D 2843	
III.	Acid gas generation test	<i>For outer sheath only</i>	T, A	IS 10810 Pt 59 / IEC-754-1	
IV.	Temperature Index Test	<i>For outer sheath only</i>	T	IS 10810 Pt 64 / ASTM D 2863	

	<b>ANNEXURE-A TO QP</b>	CUSTOMER:	PROJECT TITLE	SPECIFICATION NUMBER:
		BIDDER/VENDOR:	QUALITY PLAN NUMBER: PE-QP-999-507-E003	SPECIFICATION TITLE:
	SHEET 3 OF 3	SYSTEM: CABLE	ITEM: 1. LT PVC CONTROL CABLE	DOC. NO.

<u>S. No.</u>	<u>TEST</u>	<u>APPLICABLE FOR</u>	<u>TEST CONDUCTION REQUIRED AS</u>	<u>REFERENCE STANDARD</u>	<u>REMARKS</u>
<b>5.0</b>	<b><u>Flammability Tests</u></b>				
I.	Flammability test for bunched cables	For complete cable	<b>T, A</b>	IS 10810 Pt 62/ IEC-60332 (Part-3-23-Cat-B)	
II.	Flammability test for single cable	For complete cable	<b>T, A</b>	IS: 10810 Pt 61 / IEC:60332 Part-1	
III.	Swedish chimney test	For complete cable	<b>A</b>	SEN SS 424 1475 (Class F3)	
IV.	Flammability test	For complete cable	<b>A</b>	IEEE: 60383	
<b>6.0</b>	<b><u>Electrical Tests</u></b>				
I.	High Voltage Test (Water immersion test)	On cores	<b>T, A, R</b>	IS 10810 Pt 45	
II.	High Voltage Test at room temperature	For complete cable	<b>T, A, R</b>	IS 10810 Pt 45	
III.	Insulation Resistance Test (Volume resistivity method)	For complete cable	<b>T, A</b>	IS 10810 Pt 43	



TECHNICAL SPECIFICATION  
LT PVC CONTROL CABLE  
LARA SUPER THERMAL POWER PROJECT  
STAGE II ( 2X800 MW)

PE-TS-508-507-E003

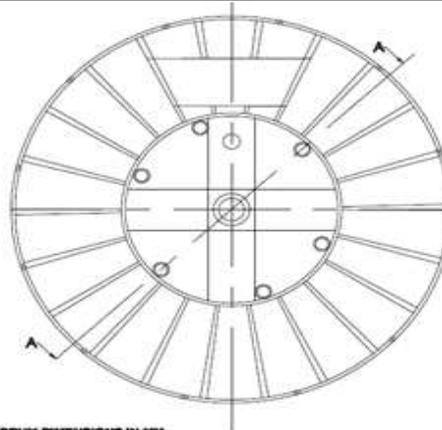
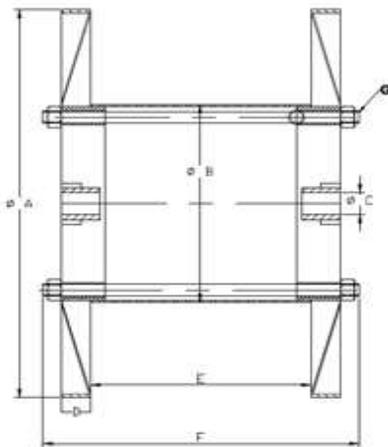
Issue No: 01

Rev. No. 00

Date :09.02.2026

## PACKING REQUIREMENT

Sl.no	DESCRIPTION
	<b>Steel Drums:</b>
1.1	Item shall be fully covered with multi layered cross laminated colourless polyethylene sheet of at least 100 GSM and shall be packed inside steel drum as per below typical drawing.
1.2	Both the end of cables shall be properly sealed with heat shrinkable seal secured by 'U' nails so as to eliminate ingress of water during transportation, storage & erection.
1.3	A tag containing same information shall be attached to the leading end of the cable.



APPROXIMATE DRUM DIMENSIONS IN MM  
ALL DIMENSIONS AND VALUES ARE  
TYPICAL AND ARE DEPENDENT ON  
CABLE WEIGHT.

A	FLANGE
B	BARREL
C	CENTRAL HOLE
D	FLANGE
E	TRAVERSE
F	GROSS WIDTH
G	STUD SIZE

= Dwg. not to scale.  
= ALL DIMENSIONS ARE IN MM.

2	<b>Packing slip &amp; holder:</b>
2.1	Packing slip kept in polyethylene bag shall be placed inside the cable drum at appropriate place.
2.2	One copy of packing slip wrapped in polyethylene bag covered in galvanized iron tin sheet/ aluminium packing slip holder shall be fixed on the external surface the cable drum.



TECHNICAL SPECIFICATION  
LT PVC CONTROL CABLE  
LARA SUPER THERMAL POWER PROJECT  
STAGE II ( 2X800 MW)

PE-TS-508-507-E003

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Rev. No. 00

Date :09.02.2026

## DOCUMENTATION REQUIREMENT

### DRAWINGS & DOCUMENTS TO BE SUBMITTED BY ALL THE BIDDERS ALONG WITH THE BID

SI. No.	DOCUMENT TITLE
1	PQR CREDENTIALS
2	COMPLIANCE SHEET

### DRAWINGS & DOCUMENTS TO BE SUBMITTED BY SUCCESSFUL BIDDER AFTER AWARD OF CONTRACT ALONG WITH SUBMISSION SCHEDULE

SI. No.	DOCUMENT TITLE	SUBMISSION SCHEDULE		
		Vendor submission (Days)*	BHEL Comment (Days)	Vendor re-submission (Days)#
<b>I</b>	<b>Primary documents</b>			
1	Datasheet and Cross Section Drawings for Control Cable	14	18	10
2	QAP for Control cables	14	18	10
<b>II</b>	<b>Secondary documents</b>			
1	Type Test Report for Control cable	7\$	3	2

NOTES:

a) \* 1st submission within indicated days from date of purchase order.

b) # Submission (within indicated days) after incorporating all BHEL comments.

c) Primary documents shall be considered for Delay analysis

d) \$: 1st submission within indicated days from date of purchase order (in case Type test report is available)/ from the date of conduction tests.

### DRAWINGS & DOCUMENTS TO BE SUBMITTED AS FINAL/AS-BUILT DOCUMENT

SI. No.	DOCUMENT TITLE
1	APPROVED DOCUMENTS
2	APPROVED QUALITY PLAN.
3	ALL TEST CERTIFICATES



TECHNICAL SPECIFICATION  
LT PVC CONTROL CABLE  
LARA SUPER THERMAL POWER PROJECT  
STAGE II ( 2X800 MW)

PE-TS-508-507-E003

Issue No: 01

Rev. No. 00

Date :09.02.2026

### COMPLIANCE CERTIFICATE

1	It is hereby confirm that the technical specification (sheet 1 to 33 ) has been read, understood. We confirm compliance to the tender specification including any clarification and amendments without any deviation.
2	It is hereby declared that any technical submittals which was not specifically asked for in NIT shall stand withdrawn.

Signature of authorised Representative

Name and Designation :

Name & Address of the Bidder

Date

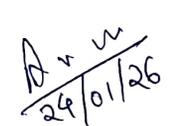
AKB

	<b>PRE-QUALIFICATION REQUIREMENTS OF LT PVC CONTROL CABLE</b>  <b>2X 800 MW LARA STPP STAGE-II</b>	PE-PQ-508-507-E015
		REVISION NO. 00 DATE 24.01.2026
		SHEET NO. 1 OF 1

<b>ITEMS :</b> LT PVC CONTROL CABLE	
<b>SCOPE:</b> Supply: YES; Erection & Commissioning: NO;	
1.0	Vendor should be a manufacturer of LT control cables.
2.0	Availability of test reports of tests of LT PVC FRLS control cables to establish in- house capability to carry out all routine type & acceptance tests as per relevant IS/ International Standards.
3.0	Capacity of manufacturing 200 km of LT Control cables per month.
4.0	Manufactured and supplied at least one (1) km of FRLS cables.
5.0	Manufactured and supplied LT control cables upto 12 cores.
6.0	Manufactured & supplied at least 400 km of LT control cables of min. 1.5 sq. mm. in one or more orders and at least 100 km of LT control cables of min. 1.5 sq. mm. in one single order.
7.0	Minimum two (2) nos. purchase orders for LT PVC control cables shall be submitted which should not be more than five (5) years old from the date of techno- commercial bid opening for establishing continuity in business.

**NOTES:**

1. Consideration of offer shall be subject to customer's approval of bidder, if applicable.
2. Bidder to submit all supporting documents in English. If documents submitted by bidder are in language other than English, a self-attested English translated document should also be submitted.
3. Notwithstanding anything stated above, BHEL reserves the right to assess the capabilities and capacity of the bidder to perform the contract, should the circumstances warrant such assessment in the overall interest of BHEL.
4. After satisfactory fulfillment of all the above criteria/ requirement, offer shall be considered for further evaluation as per NIT and all the other terms of the tender.
5. Attached annexure (**Annexure-I**) to be filled by the bidder on quality & general terms. Requisite Documents (like factory registration certificate, R&D set-up details etc.) asked in Annexure-I, shall also be attached as Annexure-F2.1 to Annexure- F2.17 along with the filled response in the Annexure-I.

<b>PREPARED BY</b>  NAME: SHWETA GABA DESIGNATION: MANAGER	<b>CHECKED BY</b>  NAME:ASHIM KUMAR DAS DESIGNATION: SR MANAGER	<b>REVIEWED BY</b>  NAME: PRAVEEN DUTTA DESIGNATION: AGM	<b>APPROVED BY</b>  NAME: DEBASISA RATH DESIGNATION: DH-ELECT(GM)
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**ANNEXURE-1**



**SUB-VENDOR QUESTIONNAIRE**

<b>i.</b>	<b>Item/Scope of Sub-contracting</b>	
<b>ii.</b>	<b>Address of the registered office</b>	<b>Details of Contact Person</b> (Name, Designation, Mobile, Email)
<b>iii.</b>	<b>Name and Address of the proposed Sub-vendor's works where item is being manufactured</b>	<b>Details of Contact Person:</b> (Name, Designation, Mobile, Email)
<b>iv.</b>	<b>Annual Production Capacity for proposed item/scope of sub-contracting</b>	
<b>v.</b>	<b>Annual production for last 3 years for proposed item/scope of sub-contracting</b>	
<b>vi.</b>	<b>Details of proposed works</b>	
<b>1.</b>	<b>Year of establishment of present works</b>	
<b>2.</b>	<b>Year of commencement of manufacturing at above works</b>	
<b>3.</b>	<b>Details of change in Works address in past (if any)</b>	
<b>4.</b>	<b>Total Area</b>	
	<b>Covered Area</b>	
<b>5.</b>	<b>Factory Registration Certificate</b>	<b>Details attached at Annexure – F2.1</b>
<b>6.</b>	<b>Design/ Research &amp; development set-up</b> (No. of manpower, their qualification, machines & tools employed etc.)	<b>Applicable / Not applicable if manufacturing is as per Main Contractor/purchaser design)</b> <b>Details attached at Annexure – F2.2</b> (if applicable)
<b>7.</b>	<b>Overall organization Chart with Manpower Details</b> (Design/Manufacturing/Quality etc)	<b>Details attached at Annexure – F2.3</b>
<b>8.</b>	<b>After sales service set up in India, in case of foreign sub-vendor</b> (Location, Contact Person, Contact details etc.)	<b>Applicable / Not applicable</b> <b>Details attached at Annexure – F2.4</b>
<b>9.</b>	<b>Manufacturing process execution plan with flow chart indicating various stages of manufacturing from raw material to finished product including outsourced process, if any</b>	<b>Details attached at Annexure – F2.5</b>
<b>10.</b>	<b>Sources of Raw Material/Major Bought Out Item</b>	<b>Details attached at Annexure – F2.6</b>
<b>11.</b>	<b>Quality Control exercised during receipt of raw material/BOI, in-process, Final Testing, packing</b>	<b>Details attached at Annexure – F2.7</b>

**ANNEXURE-1****SUB-VENDOR QUESTIONNAIRE**

12.	<b>Manufacturing facilities</b> <i>(List of machines, special process facilities, material handling etc.)</i>	<i>Details attached at Annexure – F2.8</i>			
13.	<b>Testing facilities</b> <i>(List of testing equipment)</i>	<i>Details attached at Annexure – F2.9</i>			
14.	<b>If manufacturing process involves fabrication then-</b>	<i>Applicable / Not applicable</i>			
	<b>List of qualified Welders</b>	<i>Details attached at Annexure – F2.10</i>			
	<b>List of qualified NDT personnel with area of specialization</b>	<i>(if applicable)</i>			
15.	<b>List of out-sourced manufacturing processes with Sub-Vendors' names &amp; addresses</b>	<i>Applicable / Not applicable</i>  <i>Details attached at Annexure. –F2.11</i> <i>(if applicable)</i>			
16.	<b>Supply reference list including recent supplies</b>	<i>Details attached at Annexure – F2.12</i> <i>(as per format given below)</i>			
<b>Project/ package</b>	<b>Customer Name</b>	<b>Supplied Item (Type/Rating/Model /Capacity/Size etc)</b>	<b>PO ref no/date</b>	<b>Supplied Quantity</b>	<b>Date of Supply</b>
17.	<b>Product satisfactory performance feedback letter/certificates/End User Feedback</b>	<i>Attached at annexure - F2.13</i>			
18.	<b>Summary of Type Test Report (Type Test Details, Report No, Agency, Date of testing) for the proposed product (similar or higher rating)</b> <i>Note:- Reports need not to be submitted</i>	<i>Applicable / Not applicable</i>  <i>Details attached at Annexure – F2.14</i> <i>(if applicable)</i>			
19.	<b>Statutory / mandatory certification for the proposed product</b>	<i>Applicable / Not applicable</i>  <i>Details attached at Annexure – F2.15</i> <i>(if applicable)</i>			
20.	<b>Copy of ISO 9001 certificate (if available)</b>	<i>Attached at Annexure – F2.16</i>			
21.	<b>Product technical catalogues for proposed item (if available)</b>	<i>Details attached at Annexure – F2.17</i>			
<b>Name:</b>     <b>Desig:</b>     <b>Sign:</b>     <b>Date:</b>					

Company's Seal/Stamp:-

## ANNEXURE-A (PVC FORMULA & FACTORS)

**Price variation formula for Copper conductor PVC insulated 1.1 kV control cables**  
(Applicable for all cable sizes except for 4C - 10 sq mm Cable)

$$P = P_o + CuF (Cu - C_uo) + CCFCu (PVCc-PVCco) + FeF (Fe-Feo)$$

### Tables References:

CUC	Copper conductor
P5	PVC compound
P6	Steel armour

**Price Variation formula for Copper conductor PVC insulated 1.1 kV power cables**  
(Applicable only for 4C - 10 sq mm Cable)

$$P = P_o + CuF (Cu - C_uo) + CCFCu (PVCc - PVCco) + Fef (Fe - Feo) + AIF (Al- Alo)$$

For steel armoured cables; AIF = 0 For aluminium armoured cables; FeF = 0  
For unarmoured cables; FeF, AIF = 0

### Tables References:

CUP	Copper conductor
P2	PVC compound
P3	Steel armour
P4	Aluminium armour

### PVC FACTORS

Item.No	Item Code	Item Description	CuF	CCFCu	FeF
1	507-0300043-00-A	2C - 1.5- ARMoured	0.026	0.121	0.243
2	507-0300015-00-A	3C - 1.5- ARMoured	0.039	0.131	0.257
3	507-0300019-00-A	5C - 1.5- ARMoured	0.065	0.174	0.303
4	507-0300029-00-A	7C - 1.5- ARMoured	0.091	0.199	0.329
5	507-0300942-00-A	10C - 1.5- ARMoured	0.13	0.262	0.408
6	507-0300001-00-A	12C - 1.5- ARMoured	0.157	0.277	0.289
7	507-0300021-00-A	5C - 2.5- ARMoured	0.117	0.206	0.342
8	507-0300003-00-A	12C - 2.5- ARMoured	0.282	0.371	0.342
9	507-0300944-00-A	4C - 10- ARMoured	0.382	0.277	0.293

**Ref: PW/PE/CMM-PVC Cables Packages (Rev-02)**

**Note: Applicable for cable tenders released on or after 14/01/2019.**

**Price Variation Formulae for cables -Annexure-I**

1. Prices shall be variable as per price variation formulae given below (basis IEEMA).  
The price variation shall be limited to + 20% of total ex-works price actually supplied (cable size wise) and -ve price variation shall be unlimited. Rates for working out price variation shall be as per rates published by IEEMA for the factors given in Annexure-A of BOQ cum unpriced price schedule

**2. Base date for prices:**

**Initial Price (As per IEEMA) for- Al, Cu, CCo, PVCCo & Feo:**

Base Date shall be- 1<sup>st</sup> working day of the previous month to the date of issue of tender enquiry.

**Final Price (as per IEEMA) for- Al, Cu, Cc, PVCC & Fe:**

1<sup>st</sup> working day of month, one month prior to the date on which cable is notified as being ready for inspection i.e TPIA inspection call raise date on web portal.

3. Variation factor value for ALF, CuF, CCFAL, CCFCu, XLFAL, XLFCu, FeF & FeW as applicable shall be as per Technical Specification.

4. PVC shall be payable within contractual delivery period (including any extension thereto).

**Annexure-I**  
**BOQ cum PRICE FORMAT**  
**2X800 MW LARA STPP**  
**LT PVC CONTROL CABLE**  
**TENDER REF NO - 77/25/6326/LOK**

VENDOR'S NAME - M/s.....																
S. No.	ITEM CODE	ITEM DESCRIPTION	UOM	Order Qty	Lot-1 Qty	Drum Length	Make/ Model	HSN codes	UNIT EX-WORKS PRICE (INCLUDING PACKING) (INR)	TOTAL EX-WORKS PRICE (INCLUDING PACKING) (INR)	FREIGHT RATE @.....% OF TOTAL EX-WORKS PRICE (%)	FREIGHT CHARGES (INR)	TOTAL EX-WORKS PRICE + FREIGHT CHARGES (INR)	APPLICABLE GST % RATE, refer note 04 below (%)	TOTAL GST AMOUNT (INR)	TOTAL PRICE F.O.R. SITE (INR)
1	507-0300030-00-A	2C - 1.5- ARMOURED	MTR	172000	86000	1000				0		0	0		0	0
2	507-0300002-00-A	3C - 1.5- ARMOURED	MTR	4000	2000	1000				0		0	0		0	0
3	507-0300019-00-A	5C - 1.5- ARMOURED	MTR	248000	124000	1000				0		0	0		0	0
4	507-0300021-00-A	5C - 2.5- ARMOURED	MTR	18000	9000	1000				0		0	0		0	0
5	507-0300029-00-A	7C - 1.5- ARMOURED	MTR	4000	2000	1000				0		0	0		0	0
6	507-0300049-00-A	10C - 1.5- ARMOURED	MTR	7000	4000	1000				0		0	0		0	0
7	507-0300041-00-A	12C - 1.5- ARMOURED	MTR	61000	31000	1000				0		0	0		0	0
8	507-0300003-00-A	12C - 2.5- ARMOURED	MTR	5000	3000	1000				0		0	0		0	0
9	507-0300041-00-A	4C - 10- ARMOURED	MTR	3000	1000	1000				0		0	0		0	0
<b>TOTAL</b>										0		0	0		0	0
<b>TOTAL F.O.R. PRICE IN WORDS</b>																

**NOTES :**

- Quantities indicated above shall be known as Order Quantities. The variation in quantities shall be as per NIT.
- The bidder shall indicate the unit price of each type and size of cables listed as per the BOQ-Cum-Price Schedule. The unit prices shall apply for adjustment of variation in quantity as stipulated above.
- Lot-I quantities indicated above shall be cleared for manufacturing along with PO. However, manufacturing of the cables shall be taken up by the successful bidder only after approval of technical and quality documentation. Subsequent lots shall be cleared for manufacture based on progress of engineering & site requirements.
- The standard drum length shall be 1000 meters as indicated above. Tolerance on individual drum length shall be ±5%.
- Overall tolerance on total dispatched quantity of each size shall be (-) 2% and (+) 0% except where the total ordered quantity is one single drum length of 1000m, in which case it shall be -5% to 0%. Cables consumed for testing and inspection shall be to bidder's account.
- For each individual cable size, one short length of not less than 250m may be accepted only in the final drum length to complete the supply (except where the total ordered quantity is one single drum length of 1000m). The overall tolerance limits stipulated above shall continue to apply (in case short lengths are accepted).
- For type test requirement please refer clause no. 4.2 of Technical Data -Part-A of technical specification.
- PVC shall be applicable as per PVC formula & factors mentioned in Annexure -A with upper ceiling limit of +20% & no negative ceiling limit.
- "Supplier to essentially quote prices against each line item of the BOQ in the respective columns. 'NIL', 'Free of Cost', 'Zero' etc. shall not be mentioned for any line item of the BOQ. In such case, Liquidated Damages shall be levied on the Total order/ contract value instead of undelivered portion of the Order/ contract. Also, if price of any line item (X) is mentioned 'Included' in any other line item (Y), then in case of delay in delivery of item (X), LD shall be applicable on value of item (Y)."
- Bidder to indicate 'Make' & 'Model' of each item offered in their unpriced schedule.
- Delivery schedule shall be as per NIT.



3. Any deviation not mentioned above and shown separately or found hidden in offer, will not be taken cognizance of.
4. Bidder shall submit duly filled unpriced copy of above format indicating "quoted" in "cost of withdrawl of deviation" column of the schedule above along with their Techno-commercial offer, wherever applicable. In the absence of same, such deviation(s) shall not be considered and offer shall be considered in total compliance to NIT.
5. Bidder shall furnish price copy of above format along with price bid.
6. The final decision of acceptance/ rejection of the deviations quoted by the bidder shall be at discretion of the Purchaser.
7. Bidders to note that any deviation (technical/commercial) not listed in above and asked after Part-I opening shall not be considered.
8. For deviations w.r.t. Credit Period, Liquidated damages, Firm prices if a bidder chooses not to give any cost of withdrawl of deviation loading as per Annexure-VII, will apply. For any other deviation mentioned in un-priced copy of this format submitted with Part-I bid but not mentioned in priced copy of this format submitted with Priced bid, the cost of withdrawl of deviation shall be taken as NIL.
9. Any deviation mentioned in priced copy of this format, but not mentioned in the un-priced copy, shall not be considered.
10. All techno-commercial terms and conditions of NIT shall be deemed to have been accepted by the bidder, other than those listed in unpriced copy of this format.
11. Cost of withdrawl is to be given seperately for each deviation. In no event bidder should club cost of withdrawl of more than one deviation else cost of withdrawl of such deviations which have been clubbed together shall be considered as NIL.
12. In case nature of cost of withdrawl (positive/negative) is not specified it shall be assumed as positive.
13. In case of discrepancy in the nature of impact (positive/ negative), positive will be considered for evaluation and negative for ordering.



# GUIDELINES FOR REVERSE AUCTION - 2024



# Guidelines for Reverse Auction – 2024

Doc. No. AA:SSP:RA:00  
Dated: 05.12.2024

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## 1. Scope

- 1.1. This document describes the guidelines to be followed by each Unit/ Division/ Region for conducting Reverse Auction (RA) for procurement of material/ works/ services. These guidelines will be applicable for purchases/ contracts to be awarded under Purchase/ Works policy and the RA shall follow the philosophy of English Reverse (No ties).
- 1.2. Based on these guidelines, Units/ Divisions/ Regions (hereinafter referred as 'units') may issue their own Departmental Procedures without changing the intent and spirit of the guidelines contained in this document. These guidelines will supersede earlier guidelines issued vide AA:SSP:RA:05 dated 08.03.2021.
- 1.3. 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.

## 2. Intent of Reverse Auction

To derive maximum benefit in cost savings through competitive bidding.

## 3. Upfront declaration in NIT

- 3.1. Wherever it is felt that procurement may be done through Reverse Auction, the bids shall be invited in two parts/ three parts or single part bid (Price Bid) where Techno-Commercial MoU already exists. Wherever, the evaluation is done for individual line item, separate sealed price bid for each line item shall be taken.
- 3.2. 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](http://www.bhel.com)) for this tender. RA shall be conducted*

# Guidelines for Reverse Auction – 2024

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*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 price bid along with applicable loading, if any, shall be considered for ranking.”*

## **4. Aspects to be considered for RA**

4.1. While RA can drive cost savings, they should be used judiciously, considering the broader implications beyond price alone. Therefore, RA should not be used indiscriminately or as a default mode of procurement. One may choose procurement of goods/ works/ services that are amenable to this mode of procurement.

4.2. The cases where RA would not be appropriate are as under:

- a) In Engineered products having complexity in design
- b) Items of strategic/ critical/ vital/ high technical complex nature, items that are in short supply in the market
- c) The requirement is not of high enough value to generate competitive pressures on bidders.
- d) Where the QCBS system of selection is used
- e) Where opting for RA in the tender would bring down competition
- f) EPC contracts and complex Works contracts
- g) Where it is proposed to issue parallel orders by splitting the total order quantity among more than one supplier

4.3. RA shall not be done for selection of business partners through pre-bid/ strategic tie-ups

4.4. If it is decided to go for RA, the following may be considered:

- a) Number of techno-commercially qualified bidders in previous tender for same/ similar class of item
- b) Price volatility of the item(s) under consideration
- c) Past purchase experience of similar item(s)
- d) Tender Value of the item(s) under procurement
- e) Any other aspect which may be specific to tender

Above aspects may be considered by the tender issuing authority to decide before floating of the tender, if RA is to be conducted or not for

# Guidelines for Reverse Auction – 2024

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that particular tender.

Note: Decision to go for RA or not will be on case to case basis with recorded reasons.

## 5. RA Committee

5.1. Purchase/ Tender committee, if already in place, shall also act as RA committee. Purchase representative will be the convener. In case Purchase/ Tender committee has not been formed, the Product Manager/ MM Head/ Department Head, shall constitute RA committee consisting of representatives (*rank as per DoP of tender/ negotiation committee*) from departments of Engineering/ Indenter/ User, Purchase and Finance. This committee will work for a specific tender. The role of RA committee shall be as below:

- a) To vet the comparative statement comprising sealed price bids received, MSE status, qualification against Public Procurement (Preference to Make in India), Order 2017 (PPP-MII, Order 2017) of all techno-commercially qualified bidders, loading etc. before sending it to the service provider for RA.
- b) To decide and record the 'Start-Price' and 'Bid Decrement'.
- c) To observe the RA process and declare RA as successful.

## 6. Business rules for RA

6.1. Model Business rules (annexure I) and other annexures II to VI are attached. MM shall prepare and fill in the required details in the annexures at appropriate places like:

- a) Enquiry/ Request for Quotation (RFQ) number
- b) Name and Addresses of the bidders
- c) Items description, quantities/ weight, Specification
- d) Date and time of opening and closing of RA
- e) Extension conditions
- f) Loading Criteria/ Formulae
- g) Foreign Exchange (FE) rates for evaluation
- h) Taxes & Duties
- i) Freight & Insurance
- j) Bidders' training, if required, etc.

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6.2. The calculation sheet e.g. excel sheet (which will help to arrive at 'Total Cost to BHEL') which is communicated to respective bidders of RA, will be prepared by MM and vetted by Finance. This calculation sheet will be finalized based on the evaluation criteria specified in the NIT and will be same based on which sealed price bids have been evaluated.

6.3. MM shall issue a mandate (annexure II) to the service provider covering business rules etc. and inform about event, calculation sheet etc. to all techno-commercially accepted bidders.

## 7. Role of Service Provider

- (1) Acknowledge the receipt of mandate from BHEL.
- (2) Contact the bidders, provide business rules and train them, as required.
- (3) Get the process compliance form (annexure III) signed by all the participating bidders before RA event.
- (4) Conduct the event as per the contract and business rules.
- (5) Submit the Login Reports, Results, History sheet and authorized final bid from the bidders.
- (6) To obtain price breakup from successful bidder and submit the same to BHEL.

## 8. Start Price

Start price for RA shall be lowest of sealed price bid.

*Note: Wherever more than one lowest sealed price bids are identical, RA committee shall declare the start price by reducing the lowest sealed price bid by maximum of one decrement.*

## 9. Witnessing Auction

Access to witness the RA shall be available to the concerned officials of BHEL (Indenter/ Finance Officials/ Purchase Officials), nominated by Head MM/ Purchase/ Contracts.

## 10. Reverse Auction Process

10.1. Reverse Auction will be conducted if two or more bidders are techno-commercially qualified.

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- 10.2. Wherever RA is opted in a tender, the techno-commercially qualified H1 will not be allowed to participate in RA. In case more than one H1 bidder quote the same rate, the Price Offer received last, as per the time log of the Portal, shall be removed first, on the principle of last in, first out by the system.
- 10.3. However, H1 will be allowed to participate in RA in the following cases:
- a) If number of techno-commercially qualified bidders are only 2 or 3.
  - b) In case Primary product of only one OEM is left in contention for participation in RA on elimination of H1.
  - c) For cases where there are more than 3 techno-commercially qualified bidders, if lowest bidder in sealed price bid is non-MSE and H-1 is eligible MSE and H-1 price is coming within price band of 15% of Non-MSE lowest bidder.
  - d) For cases where there are more than 3 techno-commercially qualified bidders, if lowest bidder in sealed price bid is non-MII and H-1 is eligible MII and H-1 price is coming within price band of 20% of Non-MII lowest bidder.
- 10.4. Only those bidders who submit the online sealed bid within the scheduled time shall be eligible to participate further in the RA process.
- 10.5. The lowest bidder in sealed price bid shall be shown as current L1 automatically by the system. System shall have the provision to indicate this bid as current L1 for further bidding. This price can be displaced by an even lower bid of a competing bidder.
- 10.6. If the start price is lower than the lowest sealed price bid (in line with clause 8.0), on acceptance of such start price by any bidder this bid would be indicated as current L1 for further bidding. However, if no bidder accepts the start price, RA shall be treated as cancelled for the respective line item(s) and the tender shall be processed accordingly.
- 10.7. In case of no further bidding, RA will be deemed to have been successful with current L1 bidder. 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 price bid.

# Guidelines for Reverse Auction – 2024

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Dated: 05.12.2024

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

## 11. Processing of case after RA

11.1. Wherever the evaluation is done on total cost basis, after Reverse Auction, prices of individual line items shall be reduced on pro-rata basis.

11.2. Reasonability of rates received through RA to be ascertained as per extant Policy provisions.

## 12. Payment to the Service Provider

Payment shall be made as per the agreed terms of the Framework Agreement with the service provider based on the mandate issued and service provider's invoice certified by the respective MM. If the RA event is conducted as per the mandate given by BHEL and agreed procedure, payment shall be made to the service provider irrespective of the auction outcome.

## 13. Others

13.1. If RA is being conducted for multiple line items and L1 is to be decided for individual items, number of items in single screen be restricted to 10 (ten) to avoid scrolling by the bidders.

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.

13.5. Model annexures are enclosed. However, to suit specific requirement of the Units changes in the annexures may be done with the approval of respective MM Head of Unit. Such changes shall specifically be communicated to the service provider before the RA event.

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## Business Rules for Reverse Auction

### Annexure – I

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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.
  - iii. The lowest bidder in sealed price bid shall be shown as current L1 automatically by the system and no acceptance of that price is required. System shall have the provision to indicate this bid as current L1.
  - 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,

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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 {...} 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.

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## Business Rules for Reverse Auction

### Annexure – I

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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 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.
  10. Any commercial/ technical loading shall be separately intimated to respective bidders prior to RA. The excel sheet provided in this regard shall cover all these aspects. Commercial/ technical loading if any, shall be added by the respective bidder in its price during Reverse Auction. Modalities of loading & de-loading shall be separately intimated to the bidders. The responsibility for correctness of total cost to BHEL shall lie with the bidders.
  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.

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## Business Rules for Reverse Auction

### Annexure – I

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- 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. 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
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## Business Rules for Reverse Auction

### Annexure – I

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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 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](http://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](http://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

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## Business Rules for Reverse Auction

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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 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](http://www.bhel.com)), shall be initiated by BHEL.

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## Mandate to Service Provider

## Annexure – II

**Ref:**

**Date :**

To,

M/s. {Service provider}

Sub: Providing of Services for Reverse Auction.

Ref: No {...} date {...}

Dear Sir,

Please conduct Reverse Auction as per the following details:

- **Scope:** Auction event management with training of BHEL and its bidders.
- Seek process compliance form from all the bidders provided by BHEL before start of RA event. In case of postponement of event to some other date, ensure acknowledgement from each bidder.
- Price: Rs. {.....}/- . No other duties, Taxes, levies etc. except service tax @ {.....}% shall be payable for conducting reverse auction. This price is firm.
- Payment Terms: 100% payment after successful completion of Auction.
- Completion of Auction Process: The auction process shall be deemed to have been successfully completed on receipt and acceptance of final report including hard copy/ email of the final bid with price break up, duly signed by the successful bidder who has participated in the reverse auction. The bill shall be submitted along with the completion report to the undersigned.
- Business Rules of the Reverse Auction are as per Annexure – I.
- The list of bidders with their contact details is given in Annexure – IV. and the details of the item (s) to be Reverse Auctioned are as per Annexure – V.
- Please acknowledge receipt of this letter order and also confirm that final report (duly signed and stamped by M/s. {Service provider}) including hard copy/ email of the final bid with breakup of prices duly signed by the successful bidder (duly endorsed by M/s. {Service provider}) shall be submitted within **four** working days of conclusion of auction.

**Yours sincerely,**

(for and on behalf of BHEL)

# Guidelines for Reverse Auction –2024

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## Mandate to Service Provider

## Annexure – II

**Note:**

If the event has been conducted as per mandate, you shall be paid irrespective of RA outcome.

<b>Buyer Name</b>	<ul style="list-style-type: none"><li>- Name of BHEL Unit</li><li>- Full postal address</li><li>- Fax:</li><li>- Phone:</li><li>- Email:</li><li>- Contact person name:</li><li>- Phone:</li><li>-</li></ul>
<b>Auction to be conducted by</b>	<ul style="list-style-type: none"><li>- Name of Service provider</li><li>- Full postal address</li><li>- Fax:</li><li>- Phone:</li><li>- Email:</li><li>- Contact person name:</li><li>- Phone:</li><li>-</li></ul>
<b>Date of Auction</b>	<ul style="list-style-type: none"><li>- Date of Auction</li><li>- Reverse auction time:</li><li>- Auction website:</li></ul>
<b>Documents Attached: (To be sent to the bidders)</b>	<ol style="list-style-type: none"><li>1) Business rules for Reverse Auction (<u>Annexure-I</u>)</li><li>2) Process Compliance Form (<u>Annexure-III</u>)</li><li>3) Details of item (s) to be Reverse Auctioned (<u>Annexure-V</u>)</li><li>4) Post RA Price confirmation by bidder (<u>Annexure-VI</u>)</li></ol>

# Guidelines for Reverse Auction –2024

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## Process Compliance Form

### Annexure – III

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**(The bidders are required to print this on their company's letterhead and sign, stamp before RA)**

To

- M/s. {Service provider}
- Postal address}

### **Sub: Agreement to the Process related Terms and Conditions**

Dear Sir,

This has reference to the Terms & Conditions for the Reverse Auction mentioned in the RFQ document for {Items} against BHEL enquiry/ RFQ no.{.....} dt. {.....}  
This letter is to confirm that:

- 1) The undersigned is authorized official/ representative of the company to participate in RA and to sign the related documents.
- 2) We have studied the Reverse Auction guidelines (as available on www.bhel.com), and the Business rules governing the Reverse Auction as mentioned in your letter and confirm our agreement to them.
- 3) We also confirm that we have taken the training on the auction tool and have understood the functionality of the same thoroughly.
- 4) We also confirm that, in case we become L1 bidder, we will FAX/ email the price confirmation & break up of our quoted price as per Annexure - VI within **two** working days (of BHEL) after completion of RA event, besides sending the same by registered post/ courier both to M/s. BHEL and M/s. {Service provider.}

We, hereby confirm that we will honor the Bids placed by us during the auction process.

With regards

Signature with company seal

Name –

Company / Organization

Designation within Company / Organization

Address of Company / Organization

- **Sign this document and FAX/ email it to M/s {Service provider} at {.....} prior to start of the Event.**

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## List of bidders and their address/ contact person details

### Annexure – IV

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<b>Sl. No.</b>	<b>Address</b>	<b>Contact Person</b>
1	<ul style="list-style-type: none"><li>- Name of bidder</li><li>- Full postal address</li><li>- Fax:</li><li>- Phone:</li><li>- Email:</li></ul>	<ul style="list-style-type: none"><li>- Contact person name:</li><li>- Phone:</li><li>- Email:</li></ul>
2		
3		
..		
..		

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## Details of item (s) for Reverse Auction

Annexure – V

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### 1. *{Details of items including quantity, specification, Enquiry no. & date*

1.

2.

..

..

..

}

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**RA price confirmation and breakup**  
**(To be submitted by L1 bidder after completion of RA)**

**Annexure – VI**

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**To**

- M/s. Service provider
- Postal address

CC: M/s BHEL  
{Unit-  
Address-}

Sub: **Final price quoted during Reverse Auction and price breakup**

Dear Sir,

We confirm that we have quoted.

**Rs.{\_\_\_ in value & in words\_\_\_} for item(s) covered under tender enquiry  
No. {...} dt.{...}**

Total price of the items covered under above cited enquiries is inclusive of {Packing & forwarding, GST, E.D., C.S.T., freight and insurance charges up to {.....} District,{.....} State and Type Test Charges etc., (exclusive of service tax), other as per NIT}

as our final landed prices as quoted during the Reverse Auction conducted today {date} which will be valid for a period of {\_\_\_ in nos. & in words \_\_\_} days.

The price break-up is as given below.

Total

=====  
- Rs. **in value & in words**  
=====

Yours sincerely,

For \_\_\_\_\_

**Name:**

**Company:**

**Date:**

**Seal:**

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# **GUIDELINES FOR REVERSE AUCTION - 2024**



**Note # 1**

**PROJECT GROUP I**  
**POWER SECTOR – PROJECT ENGINEERING MANAGEMENT**  
**BHARAT HEAVY ELECTRICALS LIMITED**

**SPECIAL CONDITIONS OF CONTRACT (SCC) Rev.01**  
**2 X 800 MW NTPC LARA STPS STAGE - II – EPC**  
**(JOB NO. 508)**

These Conditions shall be read and construed along with latest applicable (i.e. BOI or BOP) General Conditions of Contract (GCC) enclosed along with the tender enquiry. In case of any conflict or inconsistency, the conditions given in SCC shall prevail over the GCC.

<b>S I. N o .</b>	<b>Title</b>	<b>Description</b>
1.	Project Name	2 X 800 MW NTPC LARA STPS STAGE - II – EPC
2.	Nature of project & Type of Bidding	Mega Power Project Competitive Bidding
3.	Customer Order Ref No	Supply: - CS-9587-001R-2-FCNOA-7332, dtd 29.08.23 Services: - CS-9587-001R-2-SCNOA- 7333. dtd 29.08.23 Mandatory Spares: -CS-9587-001R-2-SCNOA- 7333, Dtd 29.08.23
4.	BHEL's Customer	NTPC
5.	NTPC LARA GST No.	22AAACN0255D4Z5
6.	Customer Consultants	NA
7.	Buyer and Paying Authority	a. For packages where BHEL PEM will issue the Purchase Order - BHEL PEM will be the paying authority. b. For packages where BHEL-PEM will issue only the LOA and Purchase Order shall be issued by BHEL PSER - BHEL PSER Site will be the paying Authority.
8.	Consignee Address (Bill To)	<b>FOR SUPPLY PACKAGES:</b> BHEL, Power Sector-Project Engineering Management, Power Project Engineering Institute, Plot No. 25, Sector-16A, Noida, Uttar Pradesh-201301. BHEL-PEM GSTIN: 09AAACB4146P2ZC  <b>FOR TURNKEY PACKAGES</b> (where BHEL-PEM will issue only the LOA and Purchase Order shall be issued by BHEL-PSER):

		Construction Manager, BHEL site office, 2 X 800 MW NTPC LARA STPS STAGE - II P.O. - PUSSORE, VILLAGE-CHHAPORA, RAIGARH CHHATTISGARH-496440 BHEL-PSER - GSTIN No.- 22AAACB4146P1ZP
9.	<b>Delivery Address</b> (Ship To)/BHEL Site office address	Construction Manager, BHEL site office, 2 X 800 MW NTPC LARA STPS STAGE - II P.O. - PUSSORE, VILLAGE-CHHAPORA, RAIGARH CHHATTISGARH-496440 BHEL-PSER - GSTIN No.- 22AAACB4146P1ZP
10.	Location of Plant	The project is located in Raigarh district of Chhattisgarh State. The project is located south-east of Raigarh town near village Lara, bounded by villages Lara, Chhapora & Lohakhan and on the western side of Odisha State boundary.  Nearest Road- NH-200 (Raigarh–Sarangarh) via Kondatarai. Nearest Railway: Raigarh Railway is approximately 30 kms. Nearest Airport: Raipur is about 250 km
11.	Mode of Dispatch	By Rail/Road/Sea on door delivery and freight pre-paid basis
12.	Packages for CIF value considered	NIL
13.	BHEL GSTIN Details	<b>For supply packages:</b> BHEL-PEM is registered in the State of Uttar Pradesh with GSTIN <b>09AAACB4146P2ZC</b> <b>For Turnkey packages:</b> BHEL-PSER – GSTIN - 22AAACB4146P1ZP
14.	QR Code Affixing Requirement for SPMS (Mandatory Requirement)	<ol style="list-style-type: none"> <li>1. Vendor to mandatorily required to furnish detailed shipping/packing list to BHEL in format as per Annexure 1 of this SCC. BHEL shall provide QR codes for each boxes/bundle/shipping sections etc.</li> <li>2.</li> <li>3. Vendor is mandatorily required to print the generated QR in half of A4 size printer using a normal printer. One copy of this QR code must be attached to the respective box/bundle/gunny bag/shipping section etc. The other copy of the QR code must be enclosed with the documents sent along with the consignment.</li> <li>4. After reaching at site, QR code shall be scanned at gate and material shall be received by site.</li> <li>5. Further, vendor to ensure that</li> <li>6. a) All the items being dispatched in the consignment/LR are listed in the packing list.</li> <li>7. b) Proper precautions are taken while affixing to ensure that the “Fixed QR Code” should not damage during transit.</li> <li>8. c) QR code is correctly fixed to all the box/bundles/loose</li> </ol>

		<p>items being dispatched in consignment. Any delay arising thereof due to incorrect tagging/missing tags shall be to vendor's account.</p> <p>BHEL shall provide QR code within 2-3 days of submission of shipping/packing details (as per Annexure-1) by vendor. Vendor to plan dispatches accordingly without affecting the delivery schedule.</p>
1 5 A	Transit Insurance	<p>As per Notice Inviting Tender (NIT).</p> <p>In case, Transit Insurance is specified in BHEL Scope in NIT - Insurance details shall be provided by BHEL-PEM.</p> <p>For each dispatch, vendor shall inform the following to the Underwriter under intimation to BHEL-PEM and BHEL Site office:</p> <ul style="list-style-type: none"> <li>• Policy No.</li> <li>• Consignee Name.</li> <li>• Consignment Details (items with their weights and value (in INR)).</li> <li>• Project Name and P.O. No.</li> <li>• LR No. and date, Dispatch origin and destination details, Invoice No.</li> <li>• Vendors to intimate the underwriters quoting the insurance Policy details.</li> </ul>
1 5 B	Insurance of unloading, storage, handling, erection and commissio ning	<p>Insurance of unloading, storage, handling, erection and commissioning shall be in BHEL Scope</p> <p><b>Insurance Deductibles:</b></p> <p>For Storage/Erection and Testing Cover</p> <ol style="list-style-type: none"> <li>a. <b>Testing and Commissioning:</b> 10% of the claim amount subject to a minimum of Rs. 3.5 Crores.</li> <li>b. <b>All others:</b> 5% of the claim amount subject to a minimum of Rs. 50 Lakhs</li> </ol> <p><b>Act of God Perils</b> 10% of the claim amount subject to a minimum of Rs. 5 Crores.</p> <p><b>For Third Party Liability:</b>The policy excess for Storage/Erection and Testing Cover as above shall apply for Third Party Liability property damage claims also</p> <p>For Third Party liability claims arising out of Acts of God Perils, the excess applicable to AOG claims shall apply.</p> <p><b>For Terrorism Cover:</b>Minimum Excess as per tariff/Indian Terrorism Pool.</p> <p>5% of loss amount subject to a minimum Rs. 1 Lakh and Maximum Rs. 2.5 Crores EEL.</p>

1 6.	Dispatch intimation	Yes, in writing, not less than 30 (Thirty) days prior to date of shipment and dispatch details to be sent to: <ul style="list-style-type: none"> <li>• BHEL Site office (address as mentioned at Sl. No. 9)</li> <li>• BHEL PEM Noida (address as mentioned in NIT for PO issued by PEM)</li> <li>• BHEL PSER (For PO Issued by BHEL PSER)</li> </ul>
1 7.	Demurrage charges	Demurrage charges shall be paid by supplier/vendor only. No claim shall be acceptable to BHEL in this regard.
1 8.	Unloading, Storage & Movement of material at site	<ul style="list-style-type: none"> <li>• By BHEL site office for supply packages (where only supply is in vendor's scope).</li> <li>• By vendors for Turnkey (where Supply and E&amp;C is in vendor scope)</li> </ul> <p><b>Note:</b> The Supplier shall furnish LR wise Gross Wt. of the consignment for the purpose of handling the consignment by BHEL Site Contractor. Please note that unloading of materials at Site shall sometimes may take 3-5 days. As such, transporters to be advised suitably before dispatch of materials in this regard. Also, no claim on a/c of delay in unloading before this period shall be entertained. Prior intimation as mentioned in sl. no. 15 above is solicited.</p>
1 9.	Taxes & Duties (For Domestic Vendor)	As per Notice Inviting Tender (NIT).
2 0.	Taxes & Duties (For Order Directly to Foreign Bidders)	In case of foreign vendors, quoted prices & Dispatches shall be on <b>C &amp; F Port –Kolkata Basis</b> and Taxes & Duties in the country of dispatch shall be borne by Foreign vendor.
2 1.	<b>Inspection Agency</b>	<p>Inspection of packages shall be carried out by agency as per below Inspection category of packages:</p> <p><b>Cat-I:</b> Inspection shall be done jointly or separately by NTPC and BHEL or BHEL's TPIA.</p> <p><b>Cat-II:</b> Inspection shall be done by BHEL only.</p> <p><b>Cat-III:</b> Certificate of Compliance shall be furnished by Vendor.</p> <p><b>Note:</b> Please note, for Cat I &amp; II items BHEL reserve the right to carry inspection by themselves or through nominated third party inspection agency (TPIA). Third party inspection agency, if any, shall be informed after award of contract.</p>
2 2.	Inspection procedure	<p><b><u>For Domestic supplies:</u></b></p> <p>- As per Notice Inviting Tender (NIT).</p> <p><b><u>For Foreign supplies</u></b></p> <p>- In case of Foreign supplies, if NTPC approved 3rd party inspection agency does not participate in the inspection, test</p>

		<p>certificates &amp; inspection reports duly accepted by the agreed Inspection agency shall be submitted in soft copy to BHEL-PEM. The same shall be reviewed by BHEL PEM and then, sent to NTPC for clearance.</p> <p>The dispatch clearance (MDCC) by NTPC/ BHEL as applicable shall be given to the foreign supplier or representative in India after acceptance of above test certificates and photographs as per above.</p>
2 3.	Material Dispatch Clearance Certificate (MDCC) Issuing Agency	MDCC shall be issued by BHEL only after receipt from NTPC. It is the responsibility of vendor to furnish all requisite documents like Material Test Certificates, Inspection Reports etc. required for obtaining of NTPC MDCC by BHEL
2 4.	Mandatory Spares	Delivery of mandatory spares shall be as per NIT.
2 5.	Constructi on Facilities to Vendor	<p><b>Construction Power:</b> Construction Power is chargeable basis as per customer contract which can be provided at single point source post establishment of Construction Power grid by PSER. Further distribution is to be done by concerned vendor.</p> <p><b>Construction water:</b> Construction water is not available within project premises. Therefore, construction water is to be arranged by vendor.</p>
2 6.	Storage Infrastru cture by Vendor	<b>For Turnkey packages:</b> Space for office will be provided free of charge as per availability in consultation with customer.
2 6. A	Storage Infrastruct ure by Vendor	<p>For Turnkey packages (Fuel Oil Handling and Storage System, Compressed Air System, Air conditioning System, Ventilation system, DM Plant, Condensate Polishing Unit, Pretreatment Plant, Mill Reject System, Effluent Treatment Plant, Sewage Treatment Plant and Station Lighting System packages)</p> <p>(a) Vendor shall compulsory make covered storage shed of minimum size of 15 feet x 15 feet for storage of valuable Electrical/ Electronic items/ Instruments etc.</p> <p>(b) Vendor shall compulsory make office of size 10 feet x 10 feet for site Engineer/ Staff along with facility of Computer/ Laptop/ Printer for protocol preparation and submission to BHEL.</p> <p>(c) Alternately, vendor can provide container of suitable size for above purpose, i.e. (a) and (b).</p>
2 6. B	Storage space by BHEL	For Turnkey package supplies - BHEL shall provide the 1 no. closed storage shed for C&I and critical items storage free of charge.

		Mandatory spares of Turnkey package shall be stored in BHEL provided closed storage shed.
2 7.	Safety Officer and Quality Engineer by Vendor	For Turnkey packages, vendor shall deploy one number Safety Officer and one number Quality Engineer during total E&C period. In case of failure of above, BHEL shall deploy it and appropriate charges shall be deducted from vendor due payments. The charges for Non-deployment of Safety officer and Quality Engineer is Rs. 50,000.00 per man-month for each staff. This charge amount is exclusive of GST.
2 8.	Packing Identification & Marking [If not specified in NIT]	Each box shall be marked with Capital Letters in "Red" indicating the PEM SUPPLY (Main Supply/Commissioning Spares/Mandatory Spares) for 2 X 800 MW NTPC LARA STPS Stage-II – II project. NOTE: Main supply item and items for commissioning spares must be packed separately. Each package delivered under the Contract shall be marked by supplier and such marking must be distinct and in English language (all previous irrelevant markings being carefully obliterated). Such marking shall show the description and quantity of contents, the name and address of consignee, the Gross weight and Net weight of the package, the name of the Supplier, PEM P.O. reference number, with a distinctive number of mark sufficient for purposes of identification. Besides above necessary, packing shall bear a special marking 'TOP', 'BOTTOM', 'DO NOT TURN OVER", "KEEP DRY", "HANDLE WITH CARE", etc.  IMPORTANT: - • Two copies of respective standard manufacturer's erection instruction/operation instruction manual shall be kept in each package / container for immediate reference by BHEL site and same shall be reflected in packing slip also. • The Packing list details for the consignment must be put inside the Box/Boxes.  Items like pumps, Valves, Hoists, Cranes etc. shall essentially have O&M Manuals and E&C guidelines duly enclosed in the packing box. Certificate to such effect shall also be reflected in packing slip.  Mandatory spares shall be properly packed separately in separate box painted in Red, <b>indicating Mandatory Spares in bold letters</b> and each spare shall be properly tagged giving details i.e. item number of the equipment in line with the CUSTOMER approved BBU for Mandatory spares & Number per item (to match the description given in the packing slip) to facilitate their- proper identification by end customer/ BHEL Site. One Copy of Packing list must be put inside the Box along with

29.	Submission of Final Drgs/ Docs along with O&M Manual, Type Test Certificates (if any)	<p><b>No. of O&amp;M Manuals</b></p> <p>As per applicable GCC / Tender documents/Kick-off meeting.</p> <p>If not specified anywhere, Vendor to submit final approved O&amp;M Manual in 12 Hard copies and 4 No of CD ROMs/DVDs/Pen drive.</p>
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	Prepared by	Checked / Reviewed by	Approved by
<b>Name</b>	Netrapal Singh	Awadhesh Singh	GC Thakur
<b>Designation</b>	Manager/ PG-I	Sr. Manager & SH-2/ P-I	Sr DGM & DH/ PG-I
<b>Signature</b>			

## Enclosures

Annexure 1 – Format of packing list/shipping list for QR code generation as per SCC Clause no. 14

Sl No	Contract No	Type	PG MA	PG MA Des	DU	DU Des	Dispatch Qty.	Unit	BBU No.	BBU No	BBU No	BBU No	Material Required For (Set1/Set-2)	NS	Remarks
	NCS-TP001R-2-	<BOI * > <*BHEL shall	<Vendor to fill	<Vendor to fill	BHE	<Vendor to fill	<Vendor to fill	<Vendor to fill	to fill BBU	<Vendor to fill	<Vendor to fill	<Vendor to fill	Vendor to fill	<Nature of Supply: Vendor	Remarks





**MARINE INSURANCE POLICY SCHEDULE**

POLICY NO. 510000/21/2025/52

ISSUED AT NEW DELHI

DATE : 25.06.2024

SL. NO.	PARTICULARS
1	<p>(i) <b>NAME AND ADDRESS OF THE PRINCIPAL BENEFICIARY</b> M/S. NTPC LTD, NTPC BHAWAN, SCOPE COMPLEX, 7 INSTITUTIONAL AREA, LODHI ROAD, NEW DELHI, PIN- 110 003</p> <p>(ii) <b>NAME AND ADDRESS OF THE INSURED :</b> M/s. BHARAT HEAVY ELECTRICALS LTD., POWER SECTOR EASTERN REGION, PLOT NO. -9/1, BLOCK DJ SALT LAKE CITY, KOLKATA-700091 AND SUB-CONTRACTORS/ VENDORS/ BHEL UNITS</p>
2	<p><b>PERIOD OF INSURANCE : 49 MONTHS</b> FROM 25.06.2024 TO 24.07.2028 (INCLUDING 2 MONTH TESTING PERIOD)</p>
3	<p><b>NATURE OF THE PROJECT:</b> M/s: NTPC Lara STPP Stage II. (2x800 MW) Project, Dist. Raigarh , Chhattishgarh</p>
4	<p><b>SITE OF ERECTION:</b> M/s. NTPC LARA STPP STAGE II, (2X800 MW) PROJECT, DIST. RAIGARH , CHHATTISHGARH</p>
5	<p><b>SCOPE OF COVER:</b> ALL MARINE/TRANSIT RISKS INCLUDING RISKS DURING LOADING/UNLOADING ARE COVERED UNDER THE POLICY</p>
6	<p><b>PREMIUM :</b> Rs. 1,26,59,402/- (WITHOUT GST.)</p>
7	<p><b>SUM INSURED : 9042.43 CRORES</b></p>
8	<p><b>JOURNEY :</b> FROM ANYWHERE IN INDIA/ ABROAD TO PROJECT SITE AT LARA STPP STAGE II, (2X800 MW) PROJECT, DIST. RAIGARH , CHHATTISHGARH</p>
9	<p><b>MODE OF TRANSPORT:</b> ALL POSSIBLE MODES OF TRANSPORT LIKE RAIL, ROAD, AIR, SEA, SHIP, BAOT, BARGE, PARCEL, COURIER ETC.</p>
10	<p><b>CONDITIONS &amp; CLAUSES</b></p> <ol style="list-style-type: none"><li>1) All risk institute cargo clause 'A'</li><li>2) Air freight cover</li><li>3) Institute replacement clause, special replacement clause (Air duty) and deferred unpacking clause.</li><li>4) Insurer's right of subrogation against insured parties (excluding carriers) waived.</li><li>5) RSMD</li><li>6) Warehouse to warehouse basis</li><li>7) War, SRCC</li></ol>
11	<p><b>COMMODITY DESCRIPTION:</b> ALL GOODS, PLANT &amp; MACHINERY, EQUIPMENTS, TOOLS, INSTRUMENTS AND OTHER MATERIAL, INCL. MANDATORY SPARES REQUIRED FOR PROJECT CONSTRUCTION OF 2 X 800 MW NTPC LARA STPP STAGE II, ( EPC ) including items brought in and sent back for repair/ rectification/ testing by any mode from anywhere in India/ABROAD TO THE SITE. HOWEVER, IF REQUIRED FOR FABRICATION/ TESTING ETC, MATERIALS CAN BE DIVERTED TO OTHER LOCATIONS ALSO.</p>
12	<p><b>SINGLE CONSIGNMENT LIMIT:</b> Rs.20 CRORES (PER BOTTOM LIMIT: Rs.20 CRORES)</p>
13	<p><b>BASIS OF SUM INSURED –</b> The "Sum to be insured" is the value of the goods / Plant / Machinery / equipment / other materials and consumables dispatched from BHEL Units / Divisions and their Vendors/suppliers in India and abroad at the</p>





	and condition it was just prior to the accident/Mishap.
14	<b>BASIS OF VALUATION:</b> - ▪ 110% of Ex-works Supply including Type Test and Inland Transportation PLUS taxes & duties plus packing & forwarding with all other expenses. For Movement of items sent for/ received after repairs/ testing/ return to the supplier etc – Sum Insured equal to value of the equipment including cost of packing, forwarding and other incidentals.  ▪ Escalation @5%.
15	<b>POLICY EXCESS:</b> 0.25% of Consignment value subject to minimum of Rs. 20,000/- for each and every claim
16	<b>STORAGE DURATION UNDER THE POLICY:</b> 60 Days
17	<b>CLAIMS PAYABLE AT-</b> THE ORIENTAL INSURANCE COMPANY LIMITED CBO. NEW DELHI, 3RD FLOOR NBCC TOWER, OKHLA PHASE I 110020
18	<b>CLAIMS SETTLING OFFICE-</b> THE ORIENTAL INSURANCE COMPANY LIMITED CBO DELHI, 3RD FLOOR NBCC TOWER, OKHLA PHASE I 110020 EMAIL IDS: 1. CMKOTNALA@ORIENTALINSURANCE.CO.IN 2. SUKHWINDER.SINGH@ORIENTALINSURANCE.CO.IN 3. SUNMEETSACHDEVA@ORIENTALINSURANCE.CO.IN
19	<b>POLICY ISSUING OFFICE-</b> THE ORIENTAL INSURANCE COMPANY LIMITED CBO DELHI, 3RD FLOOR NBCC TOWER, OKHLA PHASE I 110020

\*The respective Endorsements/wordings are attached to and form part of the Policy  
**The following form part of this Policy of insurance**

- 1 MARINE INSURANCE POLICY (TERMS AND CONDITIONS)
- 2 TERMS AND CONDITIONS OF TENDER NO. BHEL CO.FIN.INS.PSER: NTPC LARA:EPC DATED 28.05.2024 WILL PREVAIL UPON IN CASE OF CONFLICT IN TERMS AND CONDITIONS

Place:NEW DELHI  
Dated:25.06.2024



For The Oriental Insurance Company Limited

AUTHORISED SIGNATORY



**SCE POLICY SCHEDULE**

POLICY NO. 510000/44/2025/9 ISSUED AT NEW DELHI

DATE 25/06/2024

SL. NO.	PARTICULARS						
1	<p>(i) <b>NAME AND ADDRESS OF THE PRINCIPAL BENEFICIARY</b> M/S. NTPC LTD, NTPC BHAWAN, SCOPE COMPLEX, 8 INSTITUTIONAL AREA, LODHI ROAD, NEW DELHI, PIN- 110 003</p> <p>(ii) <b>NAME AND ADDRESS OF THE INSURED :</b> M/s. BHARAT HEAVY ELECTRICALS LTD., POWER SECTOR EASTERN REGION, PLOT NO. -9/1, BLOCK DJ SALT LAKE CITY, KOLKATA-700091 AND SUB-CONTRACTORS/ VENDORS/ BHEL UNITS</p>						
2	<p><b>PERIOD OF INSURANCE : 49 MONTHS</b> FROM 25.06.2024 TO 24.07.2028 ( INCLUDING 2 MONTH TESTING PERIOD)</p>						
3	<p><b>NATURE OF THE PROJECT:</b> M/s. NTPC Lara STPP Stage II, (2x800 MW) Project, Dist. Raigarh , Chhattishgarh</p>						
4	<p><b>SITE OF ERECTION:</b> M/s. NTPC LARA STPP STAGE II, (2x800 MW) PROJECT, DIST. RAIGARH , CHHATTISHGARH</p>						
5	<p><b>SCOPE OF COVER:</b> DESIGN, ENGINEERING, MANUFACTURE, SUPPLY, INSPECTION AND TESTING AT SUPPLIER'S WORKS, PACKING, FORWARDING TO SITE, TRANSPORTATION, UNLOADING, STORAGE, PRESERVATION, INSURANCE, HANDLING AT SITE, PRE-ASSEMBLY, ASSEMBLY, ERECTION, SUPERVISION, PAINTING, START-UP, PRE-COMMISSIONING, TESTING AND COMMISSIONING, TRIAL OPERATION, PERFORMANCE GUARANTEE TESTING, WARRANTY AND TRAINING OF PURCHASER'S PERSONNEL, OF COMPLETE EQUIPMENT/SYSTEM COVERING ALL MECHANICAL, ELECTRICAL, C&amp;I, ASSOCIATED STEEL STRUCTURES AND CIVIL WORKS ON EPC BASIS. ANY ITEM OR WORKS THOUGH NOT SPECIFICALLY MENTIONED BUT NEEDED TO COMPLETE THE EQUIPMENT AND SYSTEMS TO MEET THE INTENT OF THE SPECIFICATION SHALL BE PROVIDED BY BHEL WITHIN THE CONTRACT PRICE. as per TENDER NO. BHEL:CO:FIN:INS:PSER: NTPC LARA:EPC(Re) DATED 28.05.2024</p>						
6	<p><b>PREMIUM (EXCLUDING GST) : 52,28,08,539/-</b></p>						
7	<p><b>SUM INSURED – SCE COVER 11619.66 CRORES (INCLUSIVE OF CIVIL WORK : 1929.30 CRORES AND SUPPLY INCLUDING SERVICE : Rs 9690.36 CRORES)</b></p>						
8	<p><b>ADD ON COVERS :</b></p> <table border="1"><thead><tr><th>SL.NO</th><th>NAME OF THE COVER</th><th>SUM INSURED</th></tr></thead><tbody><tr><td>1</td><td>Escalation</td><td>10% of the Policy sum</td></tr></tbody></table>	SL.NO	NAME OF THE COVER	SUM INSURED	1	Escalation	10% of the Policy sum
SL.NO	NAME OF THE COVER	SUM INSURED					
1	Escalation	10% of the Policy sum					





		insured
2	Third Party liability including cross liabilities	10 Crores.
3	Surrounding Properties with FLEXA	10% of the Policy Sum Insured
4	Earthquake	Policy Sum insured
5	STFI	Policy Sum insured
6	Extended Maintenance Cover / Defect Liability Period	18 Months
7.	TERRORISM COVER	POLICY SUM INSURED
09	<p><b>DEDUCTIBLES:</b>  <b>FOR STORAGE /ERECTION AND TESTING COVER:</b>                      a) <b>Testing &amp; Commissioning:</b> 10% of the claim amount subject to a minimum of ₹3.50 Crores.                      b) <b>All others:</b> 5 % of the claim amount subject to a minimum of ₹50.00 Lakhs</p> <p><b>Act of God Perils</b> 10% of the claim amount subject to a minimum of ₹5 Crs.</p> <p><b>For Third Party Liability:</b> The policy excess for Storage /Erection and Testing Cover as above shall apply for Third Party Liability property damage claims also.</p> <p>For third party liability claims arising out of Acts of God perils, the excess applicable to AOG claims shall apply.</p> <p><b>For Terrorism Cover:</b> Minimum Excess as per Tariff/ Indian Terrorism Pool</p> <p>5% of loss amount subject to minimum ₹1 lakh and maximum ₹2.50 Crs EEL</p>	
10	<p><b>INTERNATIONAL ACCEPTED EXCLUSIONS:</b></p> <ol style="list-style-type: none"> <li>1) SANCTIONS &amp; LIMITATION CLAUSE</li> <li>2) Terror Trial Exclusion Endt (Belarus=Russia- Ukraine)</li> <li>3) Any Russian scope of works and services offered by Russian entities to the Insured</li> <li>4) Political Risk Exclusion</li> <li>5) Nuclear Energy Risk Exclusion</li> <li>6) Communicable Disease Exclusion Clause as per Treaty</li> <li>7) Property Cyber and Data Exclusion</li> <li>8) Five powers War Exclusion (amended to include triggerinf of NATO Agreement)</li> </ol>	





	9) Joint excess loss Cyber Losses Clause (JX2020-007)
11	<p><b>CLAUSES:</b> The following clauses shall form part of the SCE/EAR Policy</p> <ul style="list-style-type: none"> <li>a) 50/50 clause</li> <li>b) 72 hours clause</li> <li>c) Free automatic reinstatement clause up to 10% of the Sum Insured.</li> <li>d) Loss minimization expenses.</li> <li>e) Debris removal up to ₹ 1 CR AOA/AGGREGATE</li> <li>f) Professional fees UPTO INR 5 CRS AOA/ Aggregate</li> <li>g) Waiver of contribution clause.</li> <li>h) Waiver of Subrogation Clause.</li> <li>i) Extra charge cover</li> <li>j) Air freight cover</li> <li>k) Pair or set clause.</li> <li>l) Expediting cost including Air freight and Express freight (Up to 30% of net claim amount).</li> <li>m) Claim preparation Clause INR 5 Crs</li> <li>n) Amendment in firefighting endorsement wordings.</li> <li>o) Fragile items like glass, insulation, refractory, insulators, mineral wool mattress, fire bricks etc. (in boxes or loose as may be) - with Sum Insured up to ₹2 crores.</li> <li>p) Property belonging to or held in the care, custody or control of the insured up to a value of ₹5 crores.</li> <li>q) Additional Custom Duty upto Rs. 10 crores</li> <li>r) Off-site storage up to Rs. up to INR 25 CRS AOA/Aggregate</li> <li>s) Inland transit up to a value of ₹10 crores to cover movement / transit between one part of site &amp; other part of site including movement from / to off-site storage spanning over public road in between</li> <li>t) Civil Engineering Works – To cover the risk of loss or damage to the property brought on to the Site of Erection for the performance of the contract, as follows:             <ul style="list-style-type: none"> <li>1. All permanent Civil Engineering Works such as buildings, foundations, earthwork including materials for the constructions thereon.</li> <li>2. All temporary civil works such as buildings, sheds.</li> </ul> </li> </ul>
12	<p><b>Co INSURANCE:</b> THE ORIENTAL INSURANCE COMPANY LTD. : 51%                  THE NEW INDIA ASSURANCE CO LTD : 12%                  ICICI INSURANCE : 11%                  TATA AIG: 10%                  THE UNITED INDIA INSURANCE COMPANY LTD. : 9%                  HDFC ERGO: 4%                  THE NATIONAL INSURANCE COMPANY LTD. : 3%</p>
13	<p><b>CLAIMS PAYABLE AT-</b> THE ORIENTAL INSURANCE COMPANY LIMITED                  CBO, NEW DELHI 3RD FLOOR NBCC TOWER, OKHLA PHASE I 110020</p>
14	<p><b>CLAIMS SETTLING OFFICE-</b> THE ORIENTAL INSURANCE COMPANY LIMITED                  CBO DELHI, 3RD FLOOR NBCC TOWER, OKHLA PHASE I 110020                  EMAIL IDS: 1. CMKOTNALA@ORIENTALINSURANCE.CO.IN                  2. SUKHWINDER.SINGH@ORIENTALINSURANCE.CO.IN                  3. SUNMEETSACHDEVA@ORIENTALINSURANCE.CO.IN</p>
15	<p><b>POLICY ISSUING OFFICE-</b> THE ORIENTAL INSURANCE COMPANY LIMITED                  CBO DELHI, 3RD FLOOR NBCC TOWER, OKHLA PHASE I 110020</p>



दि ओरिएण्टल इश्योरेंस कम्पनी लिमिटेड  
(भारत सरकार का उपक्रम)



THE ORIENTAL INSURANCE COMPANY LIMITED  
(A Govt. Of India Undertaking)

\*The respective Endorsements/wordings are attached to and form part of the Policy  
The following form part of this Policy of insurance

- 1 SCE/EAR INSURANCE POLICY (TERMS AND CONDITIONS)
- 2 TERMS AND CONDITIONS OF TENDER NO. BHEL:CO:FIN:INS:PSER: NTPC LARA:EPC DATED **28.05.2024** WILL PREVAIL UPON IN CASE OF CONFLICT IN TERMS AND CONDITIONS

Place: NEW DELHI  
Dated: 25.06.2024

For The Oriental Insurance Company Limited  
AUTHORISED SIGNATORY

