BHEL invites offers from reputed Suppliers as per following terms and conditions -

1. Tender Type	Open Tender (Domestic-Indian)			
2. Mode of Enquiry	E - PROCUREMENT			
3. Project	Framework Agreement (Framework Agreement (Rate Contract) of HT XLPE CABLES		
4. Executing Agency	BHEL			
5. Package	HT XLPE CABLES			
6. Whether Package is DIVISIBLE or NON - DIVISIBLE	DIVISIBLE			
7. Due Date & Time	For offer submission	13.02.2025	12:00:00 hrs	
7. Due Date & Time	For P-1 bid opening	13.02.2025	16:00:00 hrs	
Earnest Money Deposit (EMD)	Not Applicable			
9. Tender Cost	NIL			
10. Numbers of Part bid	2-Part bid (Techno-Commercial and Price Bid)			
11. Technical Scope	As per Tech. Spec No: PE-TS-999-507-E001			
12. Pre-Bid clarifications	Suppliers to contact BHEL-PEM (over phone/ mail/ visit-BHEL-PEM) for any clarification (Technical or Commercial) at least 05 days before the due date of Tender opening & get it clarified well before the due date, so that offers by the Suppliers may be submitted within the due date & time.			
13. Prequalification Requirement	Financial PQR- YES Technical PQR- YES			
14. Delivery terms	For Supply Portion: FOR	R Dispatch Station		
15. Delivery Schedule: -				
Engineering	Drawing/ documents submission & re-submission schedule shall be as per Technical Specification: PE-TS-999-507-E001			
Main supply & Commissioning	150 days from the date	of PO (for Unit-1, Unit-2 ar	nd common area)	
Spares ("A")	1	ne additional unit and 120	,	
	additional unit i.e. 210 days in case of 3 units and 240 days in case of 4 or			
	more units.			
Mandatory Spares	NA NA			
Notes	I			

Notes

- a. Supplier to start manufacturing/supply only after getting the applicable Primary engineering Drgs. /docs approved from BHEL/End Customer.
- b. Drawings /documents submission/re-submission schedule shall be as per Technical specification (PE-TS-999-507-E001) which shall be used for progress monitoring purpose and required course correction, if any.
- c. The delivery date specified is for completion of the deliveries. Deliveries to start progressively so as to meet the completion schedule.
- d. The delivery conditions specified are for contractual purposes. However, to meet project requirement, BHEL may ask for early deliveries without any compensation thereof.
- 2.0 Validity of contract placed on basis of Framework Agreement (Rate Contract) for individual projects (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 as per point no.3, 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.

2.1 Contract for main supply & Commissioning Spares shall be valid for 210 ('C') days from the PO date. However, delay at vendor's end (if any) shall be added to the validity period and contract validity shall get extended by the delay period at vendor's end.

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

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

Contract validity: C+B (in days)

Notes:

- a. B is the Vendor delay days beyond original contractual delivery period for main supply & Commissioning Spares /extended delivery period owing to time taken by BHEL.
- b. Main supply & Commissioning Spares, applicable in the contract released/ cleared for manufacturing within contractual validity period, to be supplied by vendor/supplier at PO rates, terms and conditions.
- c. Execution of the contract quantities released beyond contract validity period shall be decided on mutual consent basis at PO rates, terms and conditions.
- 3.0 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: -

Any Delay in providing comments/ approval on Primary drawing/documents beyond the stipulated time as specified in NIT.

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.

Delay in providing engineering input/material by BHEL.

Delay in deputing inspector for inspection and delay in release of MDCC in line with GCC

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.

16. Liquidated Damages (LD):

a) Liquidated Damages (For Main 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 contract price excluding GST per week or part thereof, subject to a maximum of ten (10) percent of total of 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.

All other terms and conditions of LD shall be as per GCC Rev 07, Corrigendum 01 and Corrigendum 02 GCC Rev-07.

- 17. **Guarantee Terms:** As per Clause No-12.0 except Clause no 12.2 (b) of General Commercial Terms & Condition of GCC Rev 07.
- 18. Validity of offer shall be as per Clause no. 7 (Instruction to Suppliers) of GCC Rev 07.

19. CIF Content	Not Applicable	
	Yes, Following Independent BHEL	External Monitors (IEMs) have been appointed by
20. Integrity Pact Applicability	Shri Otem Dai, IAS (Re	td.) (<u>iem1@bhel.in</u>)
	Shri Bishwamitra Pande	ey, IRAS (Retd.) (<u>iem2@bhel.in</u>)
	Shri Mukesh Mittal, IRS	S (Retd.) (<u>iem3@bhel.in</u>)
21. Performance Security	PS Applicability	No Performance Security (PS) against the current enquiry for Framework Agreement (Rate Contract) for Tender package. However, Suppliers to note that Performance Security shall be submitted for orders placed by the concerned Purchase Groups of concerned BHEL unit on the Framework Agreement (Rate Contract). Successful Supplier/s will have to submit Performance Security for each POs (irrespective of value) which will be placed under the Framework Agreement (Rate Contract) finalized through this tender considering FA (RC) as original contract as per the format given in GCC Rev 07. Relevant details of the PS to be submitted on the basis of Framework Agreement (Rate Contract) are as following:
(PS)		Validity of PS: As per clause no. 11.0 (except 11.4) of General Commercial Terms and Conditions of GCC Rev 07.
		PS Submission: PS should be in favour of concerned BHEL unit. Supplier may opt any of the following for submission of Performance Security: -

PS Value	Initially 10% of the contract value (total Ex-works price). However, 5% of the contract value (as above) will be released after completion of main supply based on certification by Purchasing Department of BHEL unit. Balance 5% of the contract value (excluding PVC) will be released on completion of all contractual obligations, including guarantee/warranty obligations based on certification by Purchasing Department of BHEL unit. OR 5% of the contract value (total Ex-works price). Additional 5% of the contract value will be retained from first bill & subsequent bill(s) of the same contract. The retention amount will be released after completion of main supply based on certification by Purchasing Department of BHEL unit. Balance 5% of the contractual obligations, including guarantee/warranty obligations based on certification by Purchasing Department of BHEL unit.

Modes of Deposit	Performance security may be furnished in the following forms: a) Local cheques of Scheduled Banks (subject to realization)/ Pay Order/ Demand Draft/ Electronic Fund Transfer in favour of BHEL. b) Bank Guarantee from Scheduled Banks / Public Financial Institutions as defined in the Companies Act. The Bank Guarantee shall be submitted as per the format attached. c) 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). d) 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). e) Insurance Surety Bond. (Note: 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) Performance Security is to be furnished within 14 days from the date of PO 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.
Remarks for PS	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 should be refunded to the contractor 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 the warranty under the contract. c) However, Performance Security validity is to be extended based on the actual delivery of package. The Performance Security shall not carry any interest.

22. Breach of contract,
Remedies and
Termination (Tenderer to
note that this clause will
supersede any clause
regarding recovery
amount from Tenderer
due to Breach on contract
mentioned anywhere in
GCC Rev07 and its
Corrigendum)

In case of Breach of Contract,

BHEL shall recover 10% of the contract value from the Supplier using following instruments:

Encashment of security instruments like EMD, Performance Security with executing agency (PEM) against the said contract.

- (i) 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 executing agency (PEM).
- (ii) 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.
- (iii) If recovery is not possible then legal remedies shall be pursued.
- (iv) However, Supplier shall continue performance of the Order/ Contract, under all circumstances, to the extent not cancelled.
- 23. **Tender Evaluation Price will be finalized through RA** The evaluation currency for this tender shall be INR. Evaluation will be done on overall L1 (Total Package Price including Freight excluding taxes) basis with necessary loading as applicable.

In the course of evaluation, if more than one Supplier happens to occupy L-1 status, effective L-1 will be decided by soliciting discounts from the respective L-1 Suppliers.

In case more than one Supplier happens to occupy the L-1 status even after soliciting discounts, the L-1 Supplier shall be decided by a toss/ draw of lots, in the presence of the respective L-1 Supplier (s) or their representative(s). Ranking will be done accordingly. BHEL's decision in such situations shall be final & binding.

24. Insurance- As per GCC Rev 07.

25. Payment Terms:

As per clause No. 9.1 of General Commercial Terms and Conditions of GCC, Rev 07 i.e.

Payment of basic price of supplied materials (as per PO/ approved billing schedule) along with freight and taxes and duties (as applicable), shall be paid against receipt of material (receipted LR) at site on pro-rata basis. 10% of basic price of materials supplied will be retained as security deposit which will be released on pro – rata basis as below:

On receipt of Material Receipt Certificate (MRC) from project site engineer of owner/purchaser and on submission of certificate of submission of all the final documents for the package (as per Annexure IX(A) of GCC Rev 07), duly certified by Engineering Department of Purchaser.

Note:

Payment will be released within days as mentioned below after submission of complete documents:

- a. 90 days for non MSME as per MSMED Act
- b. 45 days for vendors qualified and registered as Micro and Small Enterprises MSEs as per MSMED Act
- c. 60 days for vendors qualified as Medium Enterprises as per MSMED Act."
- 26. Clause no 9.6 (excluding Notes) of GCTC of GCC Rev. 07 shall be read as-

"Suppliers shall submit billing documents for payment directly to BHEL. Payment will be released within days as mentioned below after submission of complete documents as per clause no 9.7.2 - 9.7.5:

- a. 90 days for non-MSME as per MSMED Act.
- b. 45 days for Suppliers qualified and registered as Micro and Small Enterprises MSEs as per MSMED
- c. 60 days for Suppliers qualified as Medium Enterprises as per MSMED Act."

27. Reverse Auction:

BHEL shall be resorting to Reverse Auction (RA) (Guidelines for Reverse Auction – 2024, as available on www.bhel.com on "Supplier registration page") for this tender. RA shall be conducted among all the Techno-Commercially qualified Suppliers.

Price Bids of all the Techno-Commercially qualified Suppliers shall be opened and same shall be considered as initial bids of Suppliers in RA. In case any Supplier(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.

"The Bidders has to quote the Single Price (i.e. Total Cost to BHEL) in Reverse Auction. Prices are to be inclusive of Packing & Forwarding charges, all as per tender scope, Freight as applicable, including loading (if any) but excluding GST. De-loading (if any) shall be done in line with NIT terms."

- 28. Supplier to note that this is an Open Tender enquiry & Reverse Auction participation shall be subject to following condition:
 - a. Qualifying Technical and Financial Pre-Qualification Requirement.
 - b. Techno-Commercial acceptance of offer by BHEL-PEM.
 - c. Registration in BHEL-PEM for the Tender package
 - d. Customer Approval before Reverse Auction.

The Suppliers who are not registered with BHEL-PEM may apply for registration in BHEL-PEM through Registration Portal available at https://supplier.bhel.in/. All credentials and/ or documents duly signed & stamped related to registration has to be uploaded on the website & submit the application for registration. One set of hard copy filled-up SRF downloaded from Online Registration Portal duly signed & stamped has to be submitted.

- 29. Suppliers are requested to refer clause no 26.0 (Make in India) of instructions to Supplier of GCC Rev 07. Further, following shall be taken into consideration for submitting bids by Suppliers:
 - 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), Order 2017 dated 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 the issue of the NIT, the same shall be applicable even if issued after the issue of the NIT, but before opening of Part-II bids against the NIT.
 - Minimum Local Content prescribed for HT XLPE CABLES package by Nodal Ministry is 60% and hence for this procurement, as per Public Procurement (preference to make in India), order 2017 dtd. 15.06.17, 28.05.18, 29.05.19, 16.09.20 & 19.07.24 and subsequent orders issued by the nodal ministry, this package is reserved for only Class-I supplier having Minimum local Content 60%. Class-II and Non-Local suppliers are not eligible to quote for this enquiry.
 - Suppliers are requested to go through the above-mentioned orders and submit their adherence to Public Procurement (preference to make in India), order 2017 dtd. 15.06.17, 28.05.18, 29.05.19, 16.09.20 & 19.07.24 and subsequent orders.
- 30. Purchase preference to MSE Supplier: Yes.

31, Framework Agreement (Rate Contract) Order Splitting

- a. Framework Agreement (Rate contract) is proposed for Two (02) years from placement of Framework Agreement (Rate contract) Purchase Order with a provision for further extension after review on mutual consent.
- b. Framework Agreement (Rate contract) is to be done with 3 suppliers in ratio of 45:30:25 value wise at L1 FOR site price (Ex-works + freight) for this package. However, Purchase orders placed by BHEL units for a project on the basis of Rate Contract shall not be split. Details of Framework Agreement (Rate contract) order splitting shall be as per following:

- GOI circular dated 18.05.2023 for Concurrent application of Public Procurement Policy for Micro and Small Enterprises Order, 2012 and Public Procurement (Preference to Make in India) Order,2017 shall be applicable for order splitting (in the ratio of 45:30:25) and order finalization.
- L1 Rates (Ex works + Freight) shall be counteroffered to all techno-commercially qualified Suppliers and order splitting in ratio of 45:30:25 shall be done in line with GOI circular dated 18.05.2023 for Concurrent application of Public Procurement Policy for Micro and Small Enterprises Order, 2012 and Public Procurement (Preference to Make in India) Order, 2017.
- In case acceptance of counteroffer is received from more than two Suppliers then acceptance shall be considered as per FINAL Reverse Auction Ranking (as applicable).
- In case acceptance of counteroffer is received from only one Supplier then splitting shall be done in the ratio of 70:30 between L1 vendor and the supplier who accepts L1 vendor rates.
- If none of the bidder accepts counter-offered L1 rates, then contract shall be awarded to L1 vendor for 100% value.
- c. Framework Agreement (Rate Contract) will be finalized on total lump sum basis instead of item wise evaluation so that the complete requirement against one project is not split amongst various Suppliers to minimize operational difficulty.
- 32. GOI circular dated 18.05.2023 for Concurrent application of Public Procurement Policy for Micro and Small Enterprises Order, 2012 and Public Procurement (Preference to Make in India) Order, 2017 shall be applicable for order splitting and order finalization.
- 33. All corrigenda, addenda, amendments, time extensions, clarifications, etc. to the tender will be hosted on BHEL website (www.bhel.com), https://eprocurebhel.co.in/nicgep/app & BHEL-PEM website (https://pem.bhel.com/Home.aspx). Suppliers should regularly visit websites to keep themselves updated.
- 34. If Supplier mentions Not Applicable/ Not Required/ Not Quoted in BHEL price format, the same to be substantiated by the Supplier. If such item is required to be supplied for system completion in future, same will be supplied free of cost.
- 35. All other correspondence thereof shall be addressed to the undersigned by name & designation and sent at the following address:

Kumar Suman Saurabh/ Mgr.-CMM M/s Bharat Heavy Electricals Ltd.,

Project Engineering Management, BHEL SADAN,

Plot No 25, Sector-16 A, Noida-201301

E-MAIL: sumansaurabh@bhel.in

Ph. No. 9718771765

Manish Kumar Sinha/ Sr. Mgr.-CMM M/s Bharat Heavy Electricals Ltd.,

Project Engineering Management, BHEL SADAN.

Plot No 25, Sector-16 A, Noida-201301

E-MAIL: manish.sinha@bhel.in Ph. No. 0120-6748120

- 36. GST shall be payable extra at actual as per the HSN code finalized for the items during detailed BBU.
- 37. GeM Seller ID shall be mandatory before placement of order/ award of contract to the successful Supplier.
- 38. Suppliers to quote freight charges in percentage of their quoted Total Ex-works Prices. Supplier to quote non-zero freight % for supply.
- 39. Over all (%) quantity variation: The variation on overall package value shall be limited to +/-30% of the contract value.
- 40. Bidders shall be informed that the quantities indicated in the tender are tentative quantities. No minimum quantity is guaranteed by BHEL.
- 41. PVC (Price Variation Clause) shall be applicable as per enclosed PVC Annexure to NIT. Base date for initial prices for this tender shall be one month prior to date of NIT. All bidders shall quote as per the Price

Variation Formulae provided in NIT.

- 42. Suppliers shall Quote for the entire Scope. Partial scope is not acceptable.
- 43. Suppliers to ensure that Third party/ Customer issued certificates being submitted as proof of PQR qualification should have verifiable details of document/ certificate issuing authority such as name & designation of Issuing Authority and its organization contact number and e mail Id etc. Offer of only those Suppliers shall be considered further, who meets the PQR criteria. Suppliers to furnish latest verification details for checking veracity of document(s) by BHEL. In case the same found not available, Purchaser has right to reject such document from evaluation. Format for the same is below: -

SI. No.	Project Name	Customer Name, Contact Address, Phone No. & Email ID	Contract/ Order No.	Value of Contract/ Order	Brief of Work	Completion Date

- 44. Self-declarations/ auditor's/ accountant's certificates submitted by the manufacturer/ supplier may be verified randomly by the committee constituted as per MoP Order 28-07-2020. In case of false documents/ misrepresentation of the facts requisite action against such manufacturer/ supplier will be taken based on the recommendation of the Committee.
- 45. Suppliers to comply Govt. of India, Ministry of Power, Order no.-25-111612018-PG dated 02/07/2020 regarding mandatory testing of all the Imported items/ Equipment's/Components.
- 46. This item/ Package falls under the list of items defined in Para 3 of Ministry guideline ref no. F.20/2/214-PPD(Pt.) dated 20-09-2016 (in respect of procurement of items related to public safety, health, critical Security operations and equipment's, etc.) & hence no relaxation of PQR for start-up/ MSME Suppliers is envisaged for the items/ Package.
- 47. The Supplier declares that they will not enter into any illegal or undisclosed agreement or understanding, whether formal or informal with other Supplier(s). This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process. In case, the Supplier is found having indulged in above activities, suitable action shall be taken by BHEL as per extant policies/ guidelines.
- 48. The offers of the Suppliers who are under suspension as also the offers of the Suppliers, who engage the services of the firms debarred across BHEL, shall be rejected. The list of firms debarred across BHEL is available on BHEL web site www.bhel.com.
 - 1.0 Integrity commitment, performance of the contract and punitive action thereof:
 - 1.1. Commitment by BHEL: BHEL commits to take all measures necessary to prevent corruption in connection with the tender process and execution of the contract. BHEL will during the tender process treat all Supplier(s) in a transparent and fair manner, and with equity.
 - 1.2. Commitment by Supplier/ Supplier/ Contractor:
 - 1.2.1. The Supplier/ supplier/ contractor commits to take all measures to prevent corruption and will not directly or indirectly influence any decision or benefit which he is not legally entitled to nor will act or omit in any manner which tantamount to an offence punishable under any provision of the Indian Penal Code, 1860 or any other law in force in India.
 - 1.2.2. The Supplier/ supplier/ contractor 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 and shall adhere to relevant guidelines issued from time to time by Govt. of India/ BHEL.
 - 1.2.3. The Supplier/ supplier/ contractor will perform/ execute the contract as per the contract terms & conditions and will not default without any reasonable cause, which causes loss of business/ money/ reputation, to BHEL.

If any Supplier/ supplier/ contractor during pre-tendering/ tendering/ post tendering/ award/ execution/ post-execution stage indulges in malpractices, cheating, bribery, fraud or and other misconduct or formation of cartel so as to influence the bidding process or influence the price or acts or omits in any manner which tantamount to an offence punishable under any provision of the Indian Penal Code, 1860 or any other law in force in India, then, action may be taken against such Supplier/ supplier/ contractor as per extant

guidelines of the company available on www. bhel.com and/or under applicable legal provisions".

- 49. A Supplier shall not have conflict of interest with other Suppliers. Such conflict of interest can lead to anticompetitive practices to the detriment of Procuring Entity's interests. The Supplier found to have a conflict of interest shall be disqualified. A Supplier may be considered to have a conflict of interest with one or more parties in this bidding process, if:
 - a) they have controlling partner (s) in common;' or
 - b) they receive or have received any direct or indirect subsidy/ financial stake from any of them; or
 - c) they have the same legal representative/ agent for purposes of this bid; or
 - d) they have relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the bid of another Supplier; or
 - e) Supplier participates in more than one bid in this bidding process. Participation by a Supplier in more than one Bid will result in the disqualification of all bids in which the parties are involved. However, this does not limit the inclusion of the components/ sub-assembly/ assemblies from one bidding manufacturer in more than one bid, or
 - f) In cases of agents quoting in offshore procurements, on behalf of their principal manufacturers, one agent cannot represent two manufacturers or quote on their behalf in a particular tender enquiry. One manufacturer can also authorize only one agent/ dealer. There can be only one bid from the following:
 - 1. The principal manufacturer directly or through one Indian agent on his behalf; and
 - 2. Indian/ foreign agent on behalf of only one principal,

Or

- g) A Supplier or any of its affiliates participated as a consultant in the preparation of the design or Technical specifications of the contract that is the subject of the Bid, or
- h) In case of a holding company having more than one independently manufacturing units, or more than one unit having common business ownership/ management, only one unit should quote. Similar restrictions would apply to closely related sister companies. Suppliers must proactively declare such sister/common business/ management units in same/ similar line of business.
- 50. All the above terms and conditions, post-bid agreements/ MoMs (during Techno- Commercial evaluation) shall automatically become a part of the Order/Contract after its finalization.
- 51. Suppliers to note that offers shall be submitted strictly in accordance with the requirements of tender documents. Suppliers shall upload their complete offer meeting the requirements of the tender documents on e-procurement portal https://eprocurebhel.co.in/nicgep/app.

Following documents need to be uploaded:

- Offer forwarding/ Covering letter with Un-price bid, Deviation Sheet (Cost of Withdrawal).
- Documents required for meeting Technical PQRs (Part of Tech. Spec.)
- Documents required for meeting Financial PQR
- NTPC Main Contractor's Proposal Cum Evaluation Report
- NTPC Sub Vendor Questionnaire
- Bank Guarantee Format
- Local content certificate in line with Make in India Order dated 19.07.2024
- Land Border certificate compliance as per DOE circular dated 23.02.2023.
- Price Bid on e-procurement portal https://eprocurebhel.co.in/nicgep/app
- 52. It shall be the responsibility of the Supplier to ensure that the tender is uploaded on or before the due date and time. Late offers are not accepted.
- 53. Terms & Conditions: The Terms & Conditions shall be as per enclosed Special Conditions of the Contract (copy enclosed), GCC Rev 07 & Corrigendum 01 & Corrigendum- 02 to GCC Rev-07 which is available on www.pem.bhel.com and other Terms and Conditions included in this Enguiry Letter.
- 54. All other terms and conditions shall be as per Special Conditions of Framework Agreement (Rate Contract), and GCC Rev 07 & Corrigenda-01 & Corrigenda-02 to GCC Rev 07.

 In the event of any contradiction in the terms and conditions mentioned, the order of preference shall be as mentioned in clause no. 36 of GCTC of GCC Rev 07.
- Note: In case you are not making an offer against this enquiry, you are requested to send a regret letter so as to reach us on or before the due date.

RATE CONTRACT

TECHNICAL SPECIFICATION FOR HT XLPE POWER CABLE

SPECIFICATION No. **PE-TS-999-507-E001**ISSUE NO. 01
REV NO. 00



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



PE-TS-999-507-E001 Issue No: 01 Rev. No. 00 Date :22.01.2025

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PE-TS-999-507-E001 Issue No: 01 Rev. No. 00 Date :22.01.2025

SCOPE

SCOPE OF THIS PACKAGE COVERS THE FOLLOWING:

SL.NO	PARAMETERS	REQUIREMENT
1	Supply Including Design, Engineering, Manufacturing of HT XLPE Power 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



PE-TS-999-507-E001 Issue No: 01 Rev. No. 00 Date :22.01.2025

	GENERAL TECHNICAL REQUIREMENT
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	Bidder shall carry out the type tests as listed in the Quality Plan.
8	Bidder shall confirm compliance with the Quality Plan as 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	Any sub - vendors proposed by bidder during contract stage shall be subject to BHEL/ Customer/Customer's Consultant approval in the event of order.
10	Equipment must be safe, reliable and easy to maintain at all operating condition.



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	TECHNICAL DATA - PART - A			
SL.NO	DESCRIPTION	UOM	DETAIL	
1.0	DESIGN CODES & STANDARDS			
1.1	Standard applicable in general (Latest amendment to be referred if any)		IS:7098 (Part-2)	
1.2	Current rating of cables		As per IS:3961 (Part-7)	
1.3	Short circuit rating		IEC 60949	
1.4	Conductor		IS: 8130	
1.5	Innersheath		IS: 5831	
1.6	Outersheath		IS: 5831	
2.0	DESIGN /SYSTEM PARAMETERS			
2.1	Type of Cable		HT XLPE Power Cable	
2.2	Voltage Grade		11/11KV (UE), 3.3/3.3 KV (UE)	
2.3	INSTALLATION CONDITIONS AT SITE			
2.3.1	Ambient air temperature	deg. C	50	
2.3.2	Ground temperature	deg. C	30	
3.0	CONSTRUCTION FEATURES			
3.1	CONDUCTOR			
3.1.1	Material type		Aluminium	
3.1.2	Grade		H2	
3.1.3	Class		Class 2 (Stranded)	
3.1.4	Shape		Circular	
3.1.5	Compaction		Compacted	
3.1.6	Cable Size	sq.mm	Refer Unpriced Schedule	
3.2	CONDUCTOR SCREEN			
3.2.1	Material		Extruded layer of Semi Conducting Compound	
3.2.2	Minimum thickness	mm	0.3	
3.3	XLPE INSULATION			
3.3.1	Nominal thickness of insulation	mm	As per Table-4 of IS: 7098 (Part-2)	
3.3.2	Extrusion		Triple Extrusion	

	1	1	
3.3.3	Method of extrusion		Pressure Extruded/ Vacuum Extruded
3.3.4	Method of curing		
3.3.4.1	11 kV & 3.3 kV		Dry/Gas/Steam
3.4	INSULATION SCREEN		
3.4.1	Non-Metallic Part		
3.4.1.1	Material		Extruded semiconducting compound
3.4.1.2	Minimum thickness	mm	0.3
3.4.2	Metallic Part		
3.4.2.1	MULTICORE CABLES		
3.4.2.1.1	Material		Copper Tape applied helically on each core
3.4.2.1.2	No. of tapes	Nos.	One
3.4.2.1.3	Minimum overlapping	%	20
3.4.2.1.4	Earth fault current withstand capacity		600A for 2 sec (For multi-core cables, screen of each core shall be rated individually for the above value)
3.4.2.2	SINGLE CORE CABLES		Armour shall constitute the metallic part of the screening
3.4.3	Extrusion		Refer Clause no. 3.3.3
3.4.4	Method of curing		Refer Clause no. 3.3.4
3.5	CORE IDENTIFICATION		As per IS:7098 (P-2)
3.6	INNERSHEATH		
3.6.1	Material		Extruded HRPVC Type ST-2
3.6.2	Colour		Black
3.6.3	Whether FR-LSH	+	NO
3.6.4	Inner sheath applicable for single core cable		NO
3.6.5	Material of fillers (for multicore cables)	_	Same as innersheath
3.6.6	Method of application		Extrusion
3.6.7	Thickness of inner sheath		As per Table-5 of IS: 7098 (Part-2)
3.7	ARMOUR		
3.7.1	Dimension		As per IS: 7098 (Part-2) Table-6 Method (ii) and tolerance as per IS:3975
3.7.2	Material		
3.7.2.1	Single core		Non-Magnetic hard drawn H4 grade Aluminium Single Round Wire as per IS: 8130
3.7.2.2	Multi core		Galvanised steel round wire / Galvanised steel formed wire
3.7.3	Minimum coverage		90%

		Not more than one
3.7.4	Gap between armour wire/ formed wire	armour wire/ formed wire
3.7.4	Cap between armour wire/ formed wire	space (No cross over/
		No over riding)
3.7.5	Breaking load of Joint	Not less than 95% of
3.7.3	Breaking load of Joint	normal armour
		Zinc rich paint shall be
3.7.6		applied on armour joint
3.7.0		surface of G.S. wire/
		formed wire
3.7.7	Tolerance on Formed wire dimension	As per IS:3975
3.7.8	Armour shall form metallic part of screen	For single core
0.7.0	7 timedi endii ferri metalile part er cereen	armoured cables
3.7.9	Maximum resistivity of AL round wire	0.028264 ohm-sq.mm/
	, and the second	mtr at 20 deg.C
3.7.10	Maximum resistivity of GS round wire	As per IS:3975
3.8	OUTERSHEATH	
3.8.1	Material	Extruded HRPVC Type
3.0.1	iviaterial	ST-2
3.8.2	Colour	Black
3.8.3	Whether FR-LSH	YES
3.8.4	Method of application	Extruded
		As per Table-7 of IS:
3.8.5	Thickness of outer sheath	7098 (Part-2)
3.8.6	Marking/ Embossing on Outersheath	7000 (1 411 2)
0.0.0	Widthing/ Embecomy on Gateronaum	(i) Owner's Name
3.8.6.1	At every 5 Meters by embossing	(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-UNIT' (vii) 'FRLS' (viii) Drum No. (Project specific requirement shall be furnished later)
3.8.6.2	At every 1 Meters by embossing/ printing	Progressive Sequential length. (Project specific requirement shall be furnished later)
3.9	FR-LSH CHARACTERISTICS	
		Minimum 29 (Test
3.9.1	Oxygen index	method as per IS 10810
		Part-58)
0.00	Town and we indeed	Minimum 250° C as per
3.9.2	Temperature index	ASTMD 2863

			I
3.9.3	Acid gas generation		Maximum 20% as per IEC-754 (Part-I)
3.9.4	Smoke density rating		Maximum 60% during Smoke Density Test as per ASTMD-2843
3.9.5	Flame retardance test for single cable		As per IS 7098 Part 2 (IS 10810 Part 61/ IEC 60332 PART1)
3.9.6	Flame retardance test for bunched cables		As per IEC 60332 PART- 3 Cat-B
3.10	DIAMETERS		
3.10.1	Tolerance on overall diameter	mm	(±) 2 mm over the declared value
3.11	CABLE DRUM DETAILS		
3.11.1	Туре		Steel
3.11.2	Standard drum length		1000 meter (+/-) 5% for single core cable and 750 meter (+/-) 5% for multicore cable. One drum length of each cable size can be of nonstandard length (not less than 250 meter) to match the ordered quantity subject to condition that there shall not be any joint in cable. (Project specific requirement shall be furnished later)
3.11.3	Tolerance on drum length		(±) 5%
3.11.4	Details of marking on Drum (stenciled on both sides of the drum)		a) Manufacturer's name or trade make. 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) Net Gross weight j) Purchaser's name, address and contact number (k) 'BHEL-UNIT'. (Project specific requirement shall be furnished later)

4.0	PERFORMANCE PARAMETERS		Not Applicable
1.0	T EN GIAMANGE I ANGUILETENG		Тестирисано
5.0	INSPECTION/TESTING		
	Type test conduction required	Yes	Refer Annexure to Quality plan (A.TYPE TESTS TO BE CONDUCTED) Charges for these shall be deemed to be included in the cable price.
	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.



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

	CONTRACT)		
S.No.	Particulars	Unit	Description
	1 GENERAL	1	
1	.1 Name of Manufacturer	-	
1	.2 Place of Manufacture	-	
	2 STANDARDS APPLICABLE		
	IS: 7098 Part-2	VEO	
2	Por general specification of XLPE Cables	YES	
	IS: 8130	VEO	
2	2.2 For conductor material	YES	
	IS: 5831	VEO	
4	2.3 For material of innersheath & outersheath	YES	
,	IS: 3975 / IS: 8130	VEC	
4	For armour of 3 core/ single core cables	YES	
,	IS: 10810	VEC	
	For method of tests	YES	
,	ASTMD-2863	VEC	
4	For oxygen index test	YES	
	SS:424-14-75 & IEC-60332-3 & IEC-60332-1 & IEEE:		
	2.7 60383	YES	
	For flammability test		
,	L.8 IEC-60754-1	YES	
	For acid gas generation test	TES	
,	ASTMD-2843	YES	
	For smoke generation test	ILES	
Ź	2.1 Current rating of cables conforms to	-	
2.	11 Short circuit rating conforms to	-	
0	Formula for calculating short circuit current for different		
Ζ.	durations	_	
	3 INSTALLATION CONDITIONS AT SITE		
3	3.1 Ambient air temperature	deg. C	
3	3.2 Ground temperature	deg. C	
3	3.3 Depth of laying of cables buried in ground	cm	
3	3.4 Thermal resistivity of soil	deg. C cm/W	
			1
	, INSTALLATION CONDITIONS FOR CURRENT	+	
	4 RATING SPECIFIED AT CLAUSE 7.3	1	

1		1 1	
	5 CHARACTERISTICS OF FR-LSH SHEATH	1 1	
	5.1 Oxygen index	1-	
	5.2 Temperature index	1- 1	
	5.3 Acid gas generation	1- 1	
	5.4 Smoke density rating	1- 1	
	6 CABLE DRUMS		
(6.1 Type & construction	-	
(5.2 Standard drum length	-	
,	6.3 Tolerance on drum length	1-	
	7 INFORMATION TO BE FILLED IN FOR EACH SIZE CABLE IN THE FORM OF TABLE	Н	
-	7.1 No. of cores x size	1-	
	7.2 Voltage grade (Uo/U)	kV	
	7.3 Base current ratings (*) based on Clause No. 3.0		
a)	In air	Amp	
b)	In ground	Amp	
c)	ducts	Amp	
	7.4 Short circuit rating	kA, sec	
-	7.5 Properties		
a)	D.C. resistance of conductor at20 deg. C	ohm/km	
b)	A.C. resistance of conductor at 90 deg. C	ohm/km	
c)	Reactance of cable at normal frequency	ohm/km	
d)	Electrostatic capacitance of cable at normal frequency	mF/km	
-	7.6 CONDUCTOR		
a)	Material type & grade	-	
b)	No & dia of wires in each core before stranding	no x mm	
c)	Shape	1- 1	
	7.7 CONDUCTOR SCREEN	1 1	
a)	Material	1-	
b)	Minimum thickness	mm	
	7.8 XLPE INSULATION		
a)	Nominal thickness of insulation	mm	
b)	Method of curing		
	7.9 INSULATION SCREEN		
a)	Type of screen	-	
b)	Material and thickness (minimum and nominal)	mm	

i)		Metallic	-	
		No. of tapes and Minimum overlapping	-	
ii)		Non-metallic	-	
iii)		Earth fault current withstand capacity (calculation to be furnished)	kA, sec.	
	7.1	PVC ST2 INNERSHEATH		
a)		Material	-	
b)		Thickness (min.)	mm.	
c)		Method of application	-	
1)		Multi-core cables		
i)		With fillers	-	
ii)		With out fillers	Pressure Extruded	
2)		Single core cables		
d)		Type & Shape of fillers (if used)	-	
e)		Colour	-	
	7.11	ARMOUR		
a)		Material	-	
b)		Size/ dimensions	-	
c)		Minimum no. of wires/ formed wires	-	
d)		Tolerance on formed wire dimension	-	
e)		Maximum resistivity of GS formed wire	-	
f)		Maximum resistivity of Al round wire	-	
	7.12	PVC/POLYETHYLENE ST2 FR-LSH OUTERSHEATH		
a)		Nominal thickness of outer sheath	mm.	
	7.13	DIAMETERS		
a)		Diameter of insulated conductor	mm.	
b)		Cable diameter under armour	mm.	
c)		Cable diameter over armour	mm.	
d)		Overall diameter of cable	mm.	
	7.14	Tolerance on overall diameter	(±) mm	
	7.15	Minimum bending radius	x O.D.	
	7.16	Safe pulling force	kg.	
	7.17	Weight of cable	kg./km	
a)		Weight of conductor	MT./km	
b)		Weight of XLPE insulation	MT./km	
c)		Weight of PVC (Inner Sheath & Fillers)	kg./km	
d)		Maximum resistivity of GS formed wire	kg./km	
e)		Weight of PVC/Polyethylene (Outer Sheath & Fillers)	kg./km	
	7.18	Dimension of drum	mm.	
	7.19	Shipping weight	kg	
	7.2	Cable marking on outer sheath	-	

For single core cables, the continuous current rating shall be furnished separately for armour earthed at one end and at both ends.



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QUALITY PLAN



THE PARTY	超		S	TANDARD (#ਟੈਂਪਤੰਤ ਵ	QUALITY वालिटी प्ल		TO BE FILLED IN BY NTPC								
Item (material, class, grade, rating, range, size etc.) / मद (सामग्री, वर्ग, ग्रेड, रैटिंग, रेंज, आकार आदि): HT Power FRLS Cable (3.3 kV to 33 kV)			NFORMING TO 7098 Part-II AN SPECII		CHNICAL	QP. NO. 0000-999- QOE- S-042 क्यूपी सं: 0000-899-क्यूओई -एस-042 REV/ संशोधित सं:02 DATE :तिथि: 27.08.2021 Page' पृष्ठी OF/ से 14 VALID UPTO:26.08.2024	AMAN PANDEY S K LAL KUMAR L NISHITH AGARWAL NISHITH AGRAW	F.	* * 000	ance to the state of the state					
SL. NO	COMPONENT &	Characteristics/ विशेषताएं	Class /वर्ग	Type of check/जांच के			m of check	Reference Document/ संदर्भ दस्तावेज#	Acceptance Norms/	. Record Format/		Ager			Remarks/ /टिप्पणियां
क्र.सं	OPERATIONS अवयव व संचालन	RATIONS भवयव व	TIONS ख व प्रकार M/ पम C/N सी/एन				-	स्वीकृत मानदंड	रिकॉर्ड का प्रारूप		M/ V H	C) #I	2 E		
-	,	1	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 final cable drum number or batch number. 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. 3) Sources of raw material shall be submitted at the time of submission of endorsement sheet for approval by NTPC. Raw material Brought out Items QCR NTPC Accepted Sources NTPC Accepted Verify 1.01 1.Make Sources Aluminum NTPCADS NTPC ADS -do-rod for 2. Grade MA 1S5082 / As per Rel. Std. IS 5082 conductor 3. Resistivity MA Elect As per cable mnfr NTPC Accepted Q.C.R 100% NTPC Accepted Sources Aluminum Verify 1. Make 1.02 Sources rod for NTPC ADS Manuf. NTPC ADS Verify As per mnfr Armouring 2. Grade (as applicable IS 5082 IS 5082 3. Resistivity Verify -do-QCR MA Verify 100% NTPC Accepted Sources NTPC Accepted 1. Make Copper rod (If applicable) Sources IS 613 --do--MA Verify As per IS 613 2. Resistivity cable mnfr 100% NTPC Accepted Sources NTPC Accepted 1.04 XLPE 1. Make Sources

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LEGENDY संकेतिका: • RECORDS, INDENTIFIED WITH "TICK" (Ö) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION / • "टिक" (..) के साथ प्रमाणित दिकाँई, क्यूप दस्सावेजीकरण में आपूर्तिकर्ता द्वारा अनिवार्य रूप से शामिल किया जाएगा।

** M: MANUFACTURER/SUB-SUPPLIER निर्मात : MAIN CONTRACTOR/मुख्य संविदाकार, N: NTPC/एनटीपीसी P: PERFORM/निष्पादन W: WITNESS/ गवाह AND V: VERIFICATION. AS APPROPRIATE/ सत्याप जिल्ला : CHP/सीएकपी: NTPC SHALL IDENTIFY IN COLUM "N" AS 'W': एनटीपीसी खंड "N" में रूप में करेगा ।

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ratin (सामः आदि)	Item (material, class, grade, rating, range, size etc.) / मद (सामग्री, वर्ग, ग्रेड, रेटिंग, रेंग, आकार आदि): HT Power FRLS Cable (3.3 kV to 33 kV)		CONFORMING TO CODE/ कोड के अनुरूप: IS 7098 Part-II AND NTPC TECHNICAL SPECIFICATION)				QP. NO. 0000-999- QOE- \$-042 क्यूपी सं: 0000-999-क्यूजोई -एस-042 REV/ संशोधित सं:02 DATE:/तिथि: 27.08.2021 Page/ पृष्ट OF/ से 14 VALID UPTO:26.08.2024	AMAN PANDEY DUBEY					PROV JHIG Prov C.	त है।		
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	and the state of t						-		0	D.	••	10	-	11		

and the second	for insulation	2. Type/ Grade	MA	Verify	100%	100%	NTPC ADS	NTPC ADS	do		v	V	V	
		3. Shelf life/ Storage condition	MA	Verify	100%	100%-	Compound manuf. Std	Compound manuf. Std	QCR	All III	V	V	V	
		4. All acceptance test as per manufacturer norms	MA	Verify	As per manufacturer norms	As per manufactu rer norms	NTPC ADS	NTPC ADS	Supplie r TC		V	V	V	Refer note 1
1.05	PVC Compound for Inner	I. Make	MA	Verify	As per manufacturer norms	-	NTPC Accepted Sources	NTPC Accepted Sources	Supplie rTC		V	V	-	
	sheath	2. Type/ Grade	MA	Verify	do	77.1	NTPC ADS	NTPC ADS	do		v	v	-	
1.06	Semi Conducting	1.Make	MA	Verify	100%	100%	NTPC Accepted Sources	NTPC Accepted Sources	do	1	P	v	v	
	Compound	2. Resistivity	MA	do	100%	100%	NTPCADS	NTPCADS	do		P	v	V	
		3. Shelf Life / Storage condition	МА	Verify	100%	100%	Compound manuf. recommendation	Compound manuf. recommendations	do		p	v	v	
1.07	Copper tape (Electrolytic	1. Make	MA	Verify	100%	100%	NTPC Accepted Sources	NTPC Accepted Sources	do	4	P	v	V	
	High Conductivity Copper Foils)	2. Dimension	МА	Measu	As per cable mnfr std.	-	NTPC ADS	NTPC ADS	-do		P	-	-	6

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

** M: MANUFACTURER/SUB-SUPPLIER विमीता (3प-आपूर्तिकर्ता C: MAIN CONTRACTOR/मुख्य संविदाकार, N: NTPC/एनटीपीती P: PERFORM/निष्पादन W: WITNESS/ गवाह AND V: VERIFICATION. AS APPROPRIATE/ सन्त्राक (वेता उपकृष्ट हो), CHP/सीएचपी: NTPC SHALL IDENTIFY IN COLUM "N" AS 'W': एनटीपीती खंड "N" में 'W' के रूप में करेगा ।

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

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W	製	*	S	TANDARD स्टैण्डई क्	QUALITY वातिटी प्ल		TO BE FILLED IN BY NTPC								
ratir (साम आदि	Item (material, class, grade, rating, range, size etc.) / मद (सामग्री, वर्ग, ग्रेड, रेटिंग, रेंज, आकार आदि): HT Power FRLS Cable (3.3 kV to 33 kV)		CONFORMING TO CODE/ कोड के अनुरूप: IS 7098 Part-II AND NTPC TECHNICAL SPECIFICATION)				QP, NO, 0000-999- QOE- S-042 क्यूपी सं: 0000-899-क्यूओई -एस-042 REV/ संशोधित सं:02 DATE:/तिथि: 27.08.2021 Page/ पृण्ठ3 OF/ से 14 VALID UPTO:26.08.2024	AMAN PANDEY S K LAL KUMAR I NISHITH AGARWAL NISHITH AGRAW			illed no oved o				
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		3. Resistivity	MA	Verify	100%		IS 613	15 613	Supplie rTC	v	V	v	
		4. Chem.& Phy. properties	MA	Elec & Mech.	As per cable mnfr std.	-	As per cable mnfr std.	As per cable mnfr std.	do	v	v	•	
1.08	Polyester Tape (As	1.Make	MA	Verify	100%	100%	NTPC Accepted Sources	NTPC Accepted Sources	-do	P	V	v	
	applicable)	2. Dimension	Phy.	Meas	As per cable mnfr std.	-	Manuf. Data sheet	Manuf. Data sheet	do	P	•	•	
		3. T.S & Elongation	Phy.	Phy.	-do		-do	-do	do	v		-	
1.09	Steel wire / Formed Wire	1. Make	MA	Verify	As per cable mnfr	100%	NTPC Accepted Sources	NTPC Accepted Sources	QCR	v	V	v	BIS licensees only
	applicable)	2. Dimension	MA	Meas	1 sample from each size / lot	-	NTPC APPROVED DATA SHEET & IS 3975	NTPC APPROVED DATA SHEET & IS 3975	QCR	P	-	E.	
		3. All acceptance tests as per IS 3975	MA	Verify	As per IS 3975	-	IS 3975	IS 3975	Supplic r TC	v	v	-	
1.10	PVC compound for Sheath	1. Make	MA	Verify	As per manufacturer norms	100%	NTPC Accepted Sources	NTPC Accepted Sources	QCR	v	v	V	

LEGEND (前春宿町: * RECORDS, INDENTIFIED WITH "TICK" (O) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION / * "尼本" (.) 本 祖祖 知期何者 凡本首義, 年現史 दस्तावेजीकरण में आपूर्तिकर्ता द्वारा अनिवार्य रूप से शामिल किया जाएगा।



SH	22		S	FANDARD (स्टैण्डर्ड क	QUALITY वातिटी प्ल		TO BE FILLED IN BY NTPC							
ratin (सामः आदि)			CONFORMING TO CODE/ कोड के अनुरूप: IS 7098 Part-II AND NTPC TECHNICAL SPECIFICATION)				QP. NO. 0000-999- QOE- \$-042 कव्यी सं: 0000-999-क्युओई -एस-042 REV/ संशोधित सं:02 DATE :तिथि: 27.08.2021 Page/ पृच्छ4 OF/ से 14 VALID UPTO-26.08.2024	REVIEWED BY AMAN PANDEY S K LAL SUNIL KUMAR L NISHITH STATE AGARWAL NISHITH AGRAW		* Ono	S AP	HOS JHIG Prov		
SL. NO	COMPONENT &	% विशेषताएं ATIONS यव व	Class /वर्ग	Type of Qua		n of check	Reference Document/ संदर्भ दस्तावेज#	Acceptance Norms/	Format/		Agen एजें			Remarks /टिप्पणियां
क्र.सं	OPERATIONS अवयव व संघालन		PERATIONS प्रकार M						स्वीकृत मानदंड	रिकॉर्ड का प्रारूप		M/ ए म	C/ RI	2/
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		2. Type / Grade	MA	Verify	100%	100%	NTPC ADS	NTPC ADS	QCR		v	v	v	
		3. All acceptance test as per manufacturer norms	MA	Verify	As per manufacturer norms	As per manufactu rer norms	Compound Mnfr standard	IS 5831	QCR		v	v	v	Refer note 1
		4. Thermal Stability	MA	Chem	One sample / Batch	-	IS 5831	IS 5831	QCR		P	-		
		5. Oxygen Index	MA	Chem	do	-	NTPC ADS/ IS 10810 Part 58	NTPC ADS	do		P	-		
1.11	Filler Material (As applicable	1.Type	MA	Verfy	As per manuf. Std.		NTPC ADS	NTPC ADS	QCR	•	P	-	••	
1.12	Wooden	1. Dimension	MI	Meas	Manuf. Std.	-	IS 10418	IS10418	do		P	-		
	Drum	2. Anti termite treatment	MI	Chem	Cable manuf.	-	CABLE MANUF. STD.	CABLE MANUF. STD.	COC		v	V	V	COC from drum manuf.
1.13	Steel Drum	1. Dimension	MI	Meas	-do-	**	do	do	QCR	-	P	**		
1.13	Steel Diana	2. Surface finish	MI	Meas	-do-	-	do	do	do-		P			
В	Process & Stag													
2.01	Wire Drawing	1.Surface finish	МА	Visual	One sample/Settin g of each size	**	SHOULD BE SMOOTH & FREE FROM SCRATCHES	SHOULD BE SMOOTH & FREE FROM SCRATCHES	QCR		P	-	•	
		2. Wire Diameter	MA	Meas	-do-		NTPC ADS	NTPC ADS	do-		P			
		3. Tensile test	CR	Mech	do	One	IS 8130	IS 8130	-do		P	V	V	Refer SI.

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** M: MANUFACTURER/SUB-SUPPLIER/निर्मोता / उप-आपूर्तिकर्ता C: MAIN CONTRACTOR/मुख्य संविदाकार, N: NTPC/एनटीपीसी P: PERFORM/निष्पादन W: WITNESS/ गवाह AND V: VERIFICATION. AS APPROPRIATE/ सद्भावन क्षेत्र), CHP/सीवचपी: NTPC SHALL IDENTIFY IN COLUM "N" AS 'W'.: एनटीपीसी खंड "N" में "W" के रूप में करेगा ।
Formal No.: QS-81-QAI-P-07A/F3-R0

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प्रारूप सं.



M	**		S	TANDARD स्टैण्डई क्	QUALITY वालिटी प्ल			TO BE FIL	LED IN BY N	TPC	. Au			54
ratir (साम आदि)	iting, range, size etc.) / मद IS तामग्री, वर्ग, ग्रेड, शैंटिंग, रेंज, आकार ादि): HT Power FRLS Cable 3.3 kV to 33 kV) L. COMPONENT Characteristics/ Class		NFORMING TO 7098 Part-II AN SPECII			QP. NO. 0000-999- QOE- \$-042 स्यूपी सं: 0000-999-स्यूओई -एस-042 REV/ संशोधित सं:02 DATE :तिथि: 27.08.2021 Page/ पृष्ठ 5 OF/ से 14 VALID UPTO:26.08.2024	S K LAL SUNIL	Agend to reductive regulation, reductive regulation, 1-18. Transact returning (Astronomy). C result (L.D. 4777127) or (M No 27 No 14 of 18)		* * Oug	ST AT OF A	THIS PROVE	Firence *	
SL. NO				Type of check/जांच के	Quantur	n of check	Reference Document/ संदर्भ दस्तावेज#	Acceptance Norms/	Record Format/		Ager एउ			Remarks/ /टिप्पणियां
क्र.सं	OPERATIONS अवयव व संचातन			प्रकार	M∕ पम	C/ N सी/एन		स्वीकृत मानदंड	रिकॉर्ड का प्रारूप		M/ T	C/ सी	N/ ta	
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			lessue=			sample / Setting of each size							No.3.03(iii)
		4. Wrapping test	CR	Mech	-do-	do	-do-	do	do	P	v	V	do
		5. Annealing Test	CR	Mech	-do-	do	-do-	do	-do	P	V	V	do
2.02	Bunching /	I. No. of wires	MA	Meas	do	-	- NTPC ADS	NTPC ADS	do-	P			
VACOU.	stranding	2.Dia of wire	MA	Meas	-do	-	do	do	do	P		-	
		3. Dimension of Conductor	MA	Meas	do	-	-do-	do	do	P	-	•	latter and the second
		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	-	1	
2.03	Insulation extrusion (Conductor screen, XLPE Insulation & Insulation screen)	1. Surface finish	MA	Visual	One sample / Setting of each size		Extrusion should be by triple extru- Method of curing for cables shall curing/ steam curing" up to 11KV curing " for 19/3 KV Insulation extrusion area should be dust free. Extrusion Should be sme permitted	be "dry curing / gas & "dry curing/ gas e preferably clean &	QCR-	P		-	
	and in)	2.Thickness	CR	Meas	do	-	NTPC ADS	NTPC ADS	QCR	P		-	

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ratin (साम आदि)				NFORMING TO 7098 Part-II AN SPECII			QP. NO. 0000-999- QOE- S-042 क्यूपी सं: 0000-999-क्यूओई -एस-042 REV/ संशोधित सं:02 DATE:/तिथि: 27.08.2021 Page/ पृष्ठ6 OF/ से 14 VALID UPTO:26.08.2024	AMAN PANDEY S K LAL KUMAR L NISHITH AGARWAL NISHITH AGRAW	AL STATE OF THE ST		(* ·		PROVIDED IN THE PROPERTY OF TH	. 21
SL. NO	COMPONENT &	Characteristics/ विशेषताएं	Class /वर्ग	Type of check/जांच के	Quantur	n of check	Reference Document/ संदर्भ दस्तावेज#	Acceptance Norms/	Record Format/		Agen एउँ			Remarks/ टिप्पणियां
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		3. Eccentricity & Ovality	CR	Meas	do	-	Eccentricity of core shall not exceed 10% and Ovality not to exceed 2%	Eccentricity of core shall not exceed 10% and Ovality not to exceed 2%	da	P	-		
		3.Hot Set	CR	Mech	One sample/Settin g of each size	-	IS 7098- Part II	IS 7098- Part II	do	P	-	2 ***	Sample is to be taken from both top & bottom end
2.04	Copper	1. Thickness	CR	Mech	do	-	NTPC ADS	NTPCADS	do-	P	-		
2.04	Taping	2. No. of tape	CR	Meas	-do	-	do	do-	-do-	P	-		
	raping	3. Tape application overlap	CR	Meas	do	-	do	do	do	P	-	•	
		4. Core identification tape	CR	Visual	do	•	do	do	do	P	-	-	
	E de la company			10	do		IS 7098- Part II	IS 7098- Part II	do	P	-	-	
2.05	Laying up	1. Core sequence	MA	Visual			-do-	do	do	P	-	-	
		2. Direction of lay	MA	Visual	do		Manuf. Std.	Manuf, Std	do-				The second second
		3. Lay Length	MA	Meas	do		NTPC ADS	NTPC ADS	do	р			
		4. Dia over laid up core	МА	Meas	-do-	-						- 75	
2.06	Inner Sheath	1.Colour	MA	Visual	-do		do	do	do	P	-		
2.30		2.Thickness	MA	Mcas	One sample/Settin g of each size		NTPC ADS	NTPC ADS	do	P	-		

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ratin (साम: आदि)	em (material, class, grade, ting, range, size etc.) / मद ामग्री, वर्ग, ग्रेड, रैटिंग, रॅज, आकार ादि): HT Power FRLS Cable 3.3 kV to 33 kV) COMPONENT Characteristics/ Class Type of check/आंच के						QP. NO. 0000-999- QOE- S-042 क्यूपी सं: 0000-999-क्यूओई -एस-042 REV/ संशोधित सं:02 DATE :तिथि: 27.08.2021 Page/ पृष्ठ 7 OF/ से 14 VALID UPTO:26.08.2024	MISSITTH ACCADINAL	AL STATE OF THE PARTY OF THE PA		Tono * S	SIT API	HIG Prove	(*)
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1	2	1	1	5	6		7	8	9	D*	**	10	T	11

		3.Dia over inner sheath	МІ	Meas	do	250	do	do	do	P	-	-	
2.07	Armouring (1.Dimension	MA	Meas	do		do	do	do	P	-		
	As Applicable)	2.No. of wires / strip	MA	Meas.	do		do	do	do	P	-	*	
		3. Direction of lay	MA	Visual	do	-	IS 7098- Part II	IS 7098- Part II	QCR	P		-	
		4.Coverage & Quality of armouring	MA	Mcas.	100%	-	Min. area of coverage of armout gap between amour wires / if exceed one amour wire/ formed who no cross over/ over riding owire. Zn rich paint shall be a surface of G.S. Wire /formed with amour wire joint shall not be less wire / formed wire. (As per NTPC	ormed wires shall not vire space & there shall f amour wire / formed oplied on amour joint ce. The breaking load of than 95% of that amour	QCR	P	1		
		5 Dis over armouring	MA	Meas.	One sample/Settin g of each size	•	NTPC AD		do	P	-	-	
2.08	Outer Sheath	1. Surface finish	MA	Visual	100%	•	Pimple, Fish Eye, Burnt parti- permitted. Repairing on outer sh- per NTPC specification) PVC FRLS compound shall be extruder by suction method.	eath not permitted. (As	do	P	1	-	No.
		2.Colour of sheath	MA	Visual	One sample/Settin g of each size	***	NTPC ADS	NTPC ADS	do	P	-	, T.	

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TO BE FILLED IN BY NTPC



W	8		ST	TANDARD (स्टिण्डर्ड क	QUALITY । वालिटी प्लाब			REVIEWED BY	- 46			APPR	WE.O.	F
rating (सामग्री आदि):	(material, cl g, range, size ते, वर्ग, ग्रेड, रेटिंग : HT Power kV to 33 kV	etc.) / मद r, रॅज, आकार FRLS Cable	CON IS 7	NFORMING TO 7098 Part-II AN SPECIF	CODE/ कोड D NTPC TEC FICATION)	के अनुरूपः HNICAL	QP. NO. 0000-999- QOE- S-042 क्यूपी तं: 0000-999-क्यूओई -एस-042 REV/ संशोधित सं:02 DATE:/तिथि: 27.08.2021 Page/ पृच्ठ8 OF/ से 14 VALID UPTO:26.08.2024	SK LAL SUNIL KUMAR LA			* * Out.		Pilar Prove	d is
SL.	COMPONENT	Characteristics/	Class	Type of check/जांच के	Quantum	of check	Reference Documenu संदर्भ दस्तावेज#	Acceptance Norms/	Record Format/		Agend	री .	A	lemarks/ टेप्पणियां
NO F.H	OPERATIONS अवयव व	विशेषताएं	/वर्ग	प्रकार	M/ WH	C/ N सी/एन		स्वीकृत मानदंड	रिकॉर्ड का प्रारूप		M/ ए म		N/	
- 1	संचातन						7	8	9	D*	••	10	1	1
1	2	3	4	5	6							~ ~ ~		
							NTPC ADS	NTPC ADS	do		P	-	-	
		3. Dia over outer sheath	МА	Meas	-do-	-	-do-	do	do	-	P	-	-	
- 1	i i	4.Thickness of outer	CR	Meas	-do		100000			_	P	-	_	AUDITE TO A
	٠	sheath 5. Embossing quality	MA	Visual	100%	i t ai	Following shall be embossed or pr at every 5 meter length of c identification as per 15:(1).Bate number (2) 1S 1554 -Part-1 (3) C grade (5) word "FRLS" (markin indelible).	able in addition to h number or Drum able size, (4) Voltage og shall be legible &	-do- +		P			
		6. Sequencial marking	MA	Visual	Full length		Sequential marking of length of cone meter is to be embossed or printing shall be progressive, as marking shall be legible & indelible in addition, Drum No. is also to b full cable length	rinted. Embossing or itomatic, in line &	do			-		
C	Finished Cable	J. WHAT	Donat 1											
3.01	Type Test cl	earance from NTPC	Engine	ering to be verif	ied at the time	of final ins	pection.				-	Twi	w	Refer note 2
3.02	Routine Tests	1.High Voltage test at room temperature	CR	Elect	100%	100%	NTPC ADS / IS 7098- Part II	NTPC ADS	Test certific ate	•	P	W		See
		2.Conductor	CR	Elect	100%	100%	NTPC ADS / IS 7098- Part II	NTPC ADS	do	7	P	w	W	Refer note 2
		Resistance 3. Partial Discharge Test	CR	Elect.	100%	100%	NTPC ADS / IS 7098- Part II	NTPC ADS	-do	٧	,	"	***	cable only/ Refer note 2
			1	1	1	1			Tonas and				_	Page 8 of 14

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3.03	Acceptance Te	etts	SAME IN COLUMN	ac							1 200 1		
3.03 (i)	Construction of finished Cable	1. OD of Cable	MA	Meas.	Each type & size of cables as per sampling plan of IS 7098- Part II	NTPC ADS	NTPC ADS	do		P	w	w	
		2. Laying of core	CR	Visual	-do	NTPC ADS / IS 7098- Part II	NTPC ADS/IS 7098- Part II	do	1	P	W	w	
		3. Core Identification	CR	Visual	-do	do	do	do	1	P	W	W	
		4, Colour of outer sheath & Inner sheath	МА	Visual	Each type & size of cables as per sampling plan of IS 7098- Part II	NTPC ADS	NTPC ADS	do	•	P	W	W	
		5. Inner sheath thickness	CR	Meas	-do-	do	do	do	-	P	W	w	
		6. Copper tape / Wire dimension with overlap (As applicable)	CR	Phy	-do	NTPC ADS/ Min overlap 20%	NTPC ADS/ Min. overlap 20%	do	1	P	w	w	
3.03 (ii)	Armour wires/ Formed	1.Dimensions	CR	Mcas	Each type & size of cables as per sampling plan of IS 7098- Part II	NTPC ADS/ IS7098-II	NTPC ADS	Test Certific	,	P	w	W	Test as
	wires.	2. No. of wires/ formed wire	CR	Mech	do	-do-	do	do	1	P	w	w	applicable for
		3. Tensile test	CR	Mech	do	IS 3975	IS 3975	do	1	P	V	V	Galvanized
		4. Elongation test	CR	Mech	-do	-do-	do	do	1	P	v	V	wires/ strips

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LEGEND/ संकेतिका: • RECORDS, INDENTIFIED 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 संविद्यकार, N: NTPC/एनटीपीसी P: PERFORM/निष्पादन W: WITNESS/गवाह AND V: VERIFICATION. AS APPROPRIATE/ सत्वापन (वैसा उपयुक्त 前), CHP/सीएवपी: NTPC SHALL IDENTIFY IN COLUM "N" AS "W": एनटीपीसी खंड "N" में "W" के रूप में करेगा।

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SH	ing, range, size etc.) / मद IS 7098 Part-II AND NTPC TECHNI SPECIFICATION)							TO BE FILE	ED IN BY N	TPC				
ratir (साम आदि	tem (material, class, grade, ating, range, size etc.) / मव IS 7098 Part-II AND NTPC TECHNIC SPECIFICATION) IRITAL: HT Power FRLS Cable 3.3 kV to 33 kV) IL COMPONENT Characteristics Class Type of Quantum of the labels of the checks जांच के					CHNICAL	QP. NO. 0000-999- QOE- \$-042 क्यूपी सं: 0000-999-क्यूओई -एस-042 REV/ संशोधित सं:02 DATE:/तिथि: 27.08.2021 Page/ पृष्ठ10 OF/ से 14 VALID UPTO:26.08.2024	AMAN PANDEY S K LAL SUNIL S K LAL KUMAR L NISHITH AGARWAL NISHITH AGRAW	ALEMENTS:		Tideno * Vari	Approach App	ing (tonce Color
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		5.Torsion test (for round wires only)	CR	Mech	-do	do	do	do	1	P	٧	V	Al wires
		6. Wrapping test	CR	Mech	do	do	do	-do-	1	P	V	V	
		7. Resistance test	CR	Mech	do	do	do-	do-	4	P	ν		
		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	1	P	V	V	
3.03	Conductor	1.Resistance Test	CR	Elect	do	do	do	do	-	P	W	W	
(ii)		2.Tensile test	CR	Mech	Each type & size of cables as per sampling plan of IS 7098(Part-11	IS 8130	IS 8130	Test Certific ate		P	W	w	Test report of manufacturer to be reviewed as per Sl. No. 2.01 for Tensile test & wrapping test
		3.Wrapping test	CR	Mech	do	do	do	-do	٧	P	P	W	do
3.03 (iv)	XLPE Insulation & PVC Sheath	1.Thickness of insulation & sheath	CR	Meas.	do-	NTPC ADS & IS 7098-Part II	NTPC ADS	do	-	P	W	w	

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LEGEND∮ संकेतिका: * RECORDS, INDENTIFIED 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 आपूर्तिकृती C: MAIN CONTRACTOR/मुख्य संविदाकार, N: NTPC/एनटीपीसी P: PERFORM/निष्पादन W: WITNESS/गवाह AND V: VERIFICATION. AS APPROPRIATE/ सत्यादन (जैसा प्रशुप्त हो) दिस्धा तीपचपी: NTPC SHALL IDENTIFY IN COLUM "N" AS "W": एनटीपीसी वंड "N" में "W के रूप में करेगा।

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7	**		S	TANDARD स्टैण्डर्ड ब	QUALITY न्वालिटी प्ल			TO BE FILL	ED IN BY I	ITPC					
Item (material, class, grade, rating, range, size etc.) / मद (सामग्री, यर्ग, ग्रेड, रेटिंग, रेंज, आकार आदि): HT Power FRLS Cable (3.3 kV to 33 kV)		CONFORMING TO CODE/ कोड के अनुरूप: IS 7098 Part-II AND NTPC TECHNICAL SPECIFICATION)			QP, NO. 0000-999- QOE- S-042 क्यूपी सं: 0000-899-क्यूओई - पस-042 REV/ संसोधित सं:02 DATE:/तिथि: 27.08.2021 Page/ पृष्ठ11 OF/ से 14 VALID UPTO:26.08.2024	AMAN PANDEY AMAN DUBEY SK LAL SUNIL KUMAR LAL NISHITH AGARWAL NISHITH AGRAWAL		अनुमोदि				Tarance *			
SL. NO	COMPONENT &	& विशेषताएं		Class /q/i	Type of check/जांच के	Quantum of check		Reference Document/ संदर्भ दस्तावेज#	Acceptance Norms/ स्वीकृत मानदंड	Record Format/ रिकॉर्ड का प्रारूप	ਦ ਤੋਂ		ency / जेसी		Remarks/ /टिप्पणियां
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		2.Tensile strength & elongation at break of insulation & outer sheath (before & after ageing)	CR	Mech	One sample p offered lot irre size	espective of	IS 7098-Part II	IS 7098-Part II		1	P	v	v	MTR for Ageing Test of the offered lot(Finished Cables) shall be verified	
		2(A). Tensile strength & elongation at break of insulation & outer sheath	CR	Mech	Each type & s as per samplin 7098(Pr	ng plan of IS art-11)	IS 7098-Part II	IS 7098-Part II		7	P	w	W		
	1	3. Insulation resistance (Volume resistivity method)	CR	Elect	Each type & st as per samplin 7098-P	g plan of IS	do	do	do	7	P	W	W	For Semene	

--do--

-do--

IS 7098-Part I

NTPC ADS & ASTMD2843

--do--

IS 7098-Part II

NTPC ADS

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cable only

For XLPE

insulation

Refer Note 3

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4. Partial Discharge

5. High voltage test at room temperature

6.Thermal stability on outer sheath

7. Hot Set Test for

8.Smoke density

test on outer sheath

insulation

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madelle

Each type & size of cables as per sampling plan of IS 7098-Part II

One sample of each offered lot of all offered sizes

Each type & size of cables as per sampling plan of IS 7098-Part II

One sample of each offered

lot of all offered sizes

Elect

Chem

Mech



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Item (material, class, grade, rating, range, size etc.) / मद (सामग्री, वर्ग, ग्रेड, रेटिंग, रेंज, आकार आदि): HT Power FRLS Cable (3.3 kV to 33 kV)			CONFORMING TO CODE/ कोड के अनुरूप: IS 7098 Part-II AND NTPC TECHNICAL SPECIFICATION)			QP. NO. 0000-999- QOE- \$-042 क्यूपी सं: 0000-999-क्यूजोई -एस-042 REV/ संशोधित सं:02 DATE:/तिथि: 27.08.2021 Page/ पृष्ठ 12 OF/ से 14 VALID UPTO:26.08.2024	AMAN PANDEY S K LAL KUMAR L NISHITH AGARWAL NISHITH AGRAW			Tono * N	App App	HIGH COVED		
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					6	1	7	8	0	D.	**	10	T	11

		9.Acid gas generation test on outer sheath	CR	Chem	-do	 :	NTPC ADS & IEC 60754-1	NTPC ADS	do	1	P	W	W	Refer Note 3
	i.	10. Oxygen Index	CR	Chem	do	•	NTPC ADS/ IS 10810 Part 58	do	do	V	P	W	w	Refer Note 3
į.		11.Flammability test on finished cable	CR	Chem	One sample irr		NTPC ADS & IEC 60332 Part-3 (Category-B)	do	do	1	P	W	w	
*	•	12. Surface finish & length measurement.	12.Surface finish & CR length	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 25 drums of all sizes	(1) Drum number / Outer sheath ext (2) IS 7098-Part II (3)Cable size, V. "FRLS" & Screen Fault Current & meter is to be embossed. Embossing in line & marking shall be legil Sequential marking of length of c length is to be embossed / printed. identification as per IS. Embossing / printing shall be progre line & marking shall be legible & ind	oltage grade, Words duration at every 5 shall be automatic, ole & indelible. (3) able at every meter .(4) Manufacturer's essive, automatic, in	Test Certific ate		P	W	W	Pimple, Fish Eye, Burnt particles, Blow Hole etc. not permitted. Repairing on outer sheath not permitted.
		13. 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 ap between armour wires / for exceed one armour wire/ formed win be no cross over/ over riding of an wire.	g shall be 90%. The med wires shall not e space & there shall	do-	4	P	w	W	Zn rich paint shall be applied on armour joint surface of G.S. Wire /formed wire
		14. Measurement of Eccentricity & Ovality	CR	Meas.	do	do	Eccentricity of core shall not exceed to exceed 2%	10% and Ovality not	-do	1	P	w	W	

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4.01	Identification	MILC Scannik	TANK I	7 10 001			The state of the s						
141		NTPC Scaling	MA	Visual	100%	100%	Scaling shall be visible	QCR	N	P	I V		
							with heat shrinkable PVC/ rubber caps secured by "U" nails.				1	V	
4	Packing	1. Scaling	MA	Visual	100%		(1) IS 7098-Part II (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 scaled			1	-		

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 will carry out ageing test & the test report will be reviewed by NTPC (quantum of ageing test sample shall be one sample /batch)
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 and Main Contractor at the time of final inspection. NTPC and Main Contractor will also witness routine tests on cables on 10% sample basis. (b) In case of manufacturers / supplier WHO HAVE NOT 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, NTPC will witness routine tests on cables for the first order on 10% sample basis and Main Contractor will
3)	witness routine tests on cables for the first order on 100% basis. 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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LEGEND√ संकेतिका: * RECORDS, INDENTIFIED WITH "TICK" (Ŏ) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION./ * "टिक" (...) के साथ प्रमाणित रिकॉर्ड, क्यूए दस्तावंजीकरण में आयुर्तिकर्ता द्वारा अनिवार्य रूप से शामिम किया जाएगा।

4 अपने कार्या व आपूर्त कर्ता व्याप आवार कर अपने कार्या । अप-आपूर्तिकर्ता C: MAIN CONTRACTOR/मुख्य संविद्यकार, N: NTPC/एनटीपीसी P: PERFORM/निष्पादन W: WITNESS/जवाह AND V: WEINIGATION. AS APPROPRIATE/ सत्यापन (考研 अपनुष्ट्य हो), CHP/सीएवपी: NTPC SHALL IDENTIFY IN COLUM "N" AS 'W'.: एनटीपीसी खंड "N" में 'W' के रूप में करेगा ।

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ratii (साम आदि	n (material, cla ng, range, size धी, वर्ग, ग्रेड, रेटिंग,): HT Power kV to 33 kV)	etc.) / मद , रेंज, आकार FRLS Cable		NFORMING TO 7098 Part-II AN SPECI			QP. NO. 0000-999- QOE- S-042 क्यूपी सं: 0000-999-क्यूओई -पस-042 REV/ संशोधित सं:02 DATE :/तियः: 27.08.2021 Page/ पृष्ठ14 OF/ से 14 VALID UPTO:26.08.2024	AMAN PANDEY SK LAL KUMARL NISHITH AGARWAL NISHITH AGRAW	A STATE OF THE PARTY OF THE PAR		***	A	नुमो नुमो क्रिक्ट	red c
SL. COMPONENT Characteristics/		& विशेषताएं /वर्ग check/जांच के		Reference Document/ संदर्भ दस्तावेज#	Acceptance Norms/	Record Format/		Ager एजे	C 100 C		Remarks/ /टिप्पणियां			
क्र.सं	OPERATIONS अवयव व संचालन		70,88	प्रकार	M/ U M	C/ N सो/एन		स्वीकृत मानदंड	रिकॉर्ड का प्रारूप		M/ V H	C/ 机	N/ tra	
1	2	3	4	5	6		7	8	9	D*	••	10	T	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.
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

Page 14 of 14

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

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

Format No.: QS-01-QAI-P-07A/F3-R0 प्रारूप सं, Engg. Div./QA&I अभि. प्रभाग_क्यूए व आई

Annexure "A" to Standard Quality Plan

TYPE/ ACCEPTANCE/ ROUTINE TEST REQUIREMENTS

A. Type Test:

- 1. Tests for which "T" is indicated in the 'Test Conduction Required As' column below shall be conducted as Type Test.
- Sampling:
 - a) Type test to be conducted on one size for each type (voltage grade) of cable, preferably the highest cross-section area for single/ multicore.
 - b) Electrical tests to be conducted on one drum of every size & voltage grade of cables.
 - c) FRLS test & Flammability Test to be conducted on one size for each voltage grade of cables. Sampling quantity as per appendix –D of IS 7098-2, D2.2.
- 3. Repeat type test(s) are not required, in case the requirements of note no. 2, clause no. 3.2 of IS 7098-2 (as per amendment no. 2 of 2022) are met.

B. Acceptance Test:

- 1. Tests for which "A" is indicated in the 'Test Conduction Required As' column below shall be conducted as Acceptance tests.
- 2. Sampling:
 - a) Sampling for acceptance tests shall be as per D-2.2 of Annexure-D of IS-7098-2.
 - b) FRLS test & Flammability Test to be conducted on one size for each voltage grade of cables. Sampling quantity as per appendix–D of IS 7098-2, D2.2.

C. Routine Test:

- 1. Tests for which "R" is indicated in the 'Test Conduction Required As' column below shall be conducted as Routine tests.
- 2. Sampling: Routine tests shall be conducted on 100% cable drums.

<u>S. No.</u>	TEST	<u>APPLICABLE</u>	TEST CONDUCTION REQUIRED AS	REFERENCE STANDARD	REMARKS
1.0	Tests for Conductor				
I.	Annealing test	For copper conductor only	T, A	IS 10810 Pt 1	Internal in process Test Report to be furnished for acceptance test
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 aluminium conductor	T, A, R	IS 10810 Pt 5	
2.0	Tests for Armour Wires/Strips				
Ī.	Measurement of dimensions	For Aluminium wire & GS wire/Strip	T, A	IS 10810 Pt 36	
II.	Tensile test	For Aluminium wire & GS wire/Strip	T, A	IS 10810 Pt 37	
III.	Elongation at break test	For GS wire/Strip only	T, A	IS 10810 Pt 37	

Annexure "A" to Standard Quality Plan

S. No.	TEST	APPLICABLE	TEST CONDUCTION REQUIRED AS	REFERENCE STANDARD	REMARKS
IV.	Torsion test	For GS round wire only	T, A	IS 10810 Pt 38	
V.	Winding test	For GS strip only	T	IS 10810 Pt 39	
VI.	Resistivity test	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	For G. S. wires/Strip only	T, A	IS 10810 Pt 3	
X.	Adhesion Test	For G. S. wires/Strip only	T, A	IS 10810 Pt 3	
3.0	Physical Tests for XLPE Insulation				
I.	Test for thickness & Eccentricity		T, A	IS 10810 Pt 6	
II.	Tensile strength and elongation test at break		,		
(a)	Before ageing		T, A	IS 10810 Pt 7	
(b)	After ageing		T, A	IS 10810 Pt 7	
III.	Ageing in air oven		T	IS 10810 Pt 11	
IV.	Hot set test		T, A	IS 10810 Pt 30	
V.	Shrinkage test		T	IS 10810 Pt 12	
VI.	Water absorption (gravimetric) test		Т	IS 10810 Pt 33	
VII.	Insulation resistance (Volume resistivity) test		A	Table-1 of IS 7098-II	
4.0	Tests On Extruded Semi- conducting Screen & Copper Tape				
I.	Test for Strippability (when applicable)	For Semi-conducting Strippable screen	Т	Table-2 & Annex B of IS 7098-II	Not applicable for bonded type
II.	Volume Resistivity	Applicable for Semi-conducting Strippable screen	Т	Table-2 & Annex E of IS 7098-II	
III.	Dimension with Overlap	Applicable for Metallic Copper Tape	A		As per approved Datasheet
IV.	Conductivity/ Continuity check	Applicable for Metallic Copper Tape	A	Manufacturer's practice/ standard	
5.0	Physical Tests for PVC sheath				
l.	Test for thickness & Eccentricity	For inner & outer sheath	T, A	IS 10810 Pt 6	
II.	Tensile strength and elongation test at break	For outer sheath only			
(a)	Before ageing		T, A	IS 10810 Pt 7	
(b)	After ageing		T, A	IS 10810 Pt 7	
III.	Ageing in air oven	For outer sheath only	Ť	IS 10810 Pt 11	
IV.	Shrinkage test	For outer sheath only	T	IS 10810 Pt 12	
V.	Hot deformation test	For outer sheath only	T	IS 10810 Pt 15	
VI.	Loss of mass in air oven test	For outer sheath only	T	IS 10810 Pt 10	
VII.	Heat shock test	For outer sheath only	Т	IS 10810 Pt 14	
VIII.	Thermal stability test	For outer sheath only	T, A	IS 10810 Pt 60	

Annexure "A" to Standard Quality Plan

<u>S. No.</u>	TEST	<u>APPLICABLE</u>	TEST CONDUCTION	REFERENCE STANDARD	<u>REMARKS</u>
			REQUIRED AS		
8.0	Electrical Tests				
l.	Thermal ageing test	For complete cable	Т	IS 7098-II	
II.	Partial discharge test (shall be carried out on full drum length)	For complete cable (full drum length)	T, A, R	IS 10810 Pt 46	For screened cables only.
III.	Bending Test		Т	IS 10810 Pt 50	For screened cables only.
IV.	Dielectric Power Factor Test (i) As a function of voltage (ii) As a function of temperature		Т	IS 10810 Pt 48	For screened cables only, with voltage ≥ 6.35/11 kV
V.	Insulation Resistance Test (Volume resistivity method)	For complete cable	T, A	IS 10810 Pt 43	
VI.	Heat Cycle Test		Т	IS 10810 Pt 49	For screened cables only.
VII.	Impulse Withstand Test		Т	IS 10810 Pt 47	For screened cables only.
VIII.	High Voltage Test (water immersion)	For complete cable	T, A, R	IS 10810 Pt 45	
IX.	Flammability Test	For PVC/ HRPVC sheathed cable	Т	IS 10810 Pt 53	
6.0	Improved Fire performance (FR-LSH) Tests				
l.	Oxygen index test	For inner (as applicable)/ outer sheath	T, A	IS 10810 Pt 58 / ASTMD 2863	
II.	Smoke density test	For inner (as applicable)/ outer sheath	T, A	IS 13360 Pt 6 Sec 9 / ASTMD 2843	
III.	Acid gas generation test	For inner (as applicable)/ outer sheath	T, A	IS 10810 Pt 59 / IEC-754-1	
IV.	Temperature Index Test	For inner (as applicable)/ outer sheath	T, A	IS 10810 Pt 64 / ASTMD 2863	
<u>7.0</u>	Flammability Tests				
I.	Flammability test for bunched cables	For complete cable	T, A	IEC-60332 (Part-3 of 23 CAT-B)	
II.	Flammability test for single cable	For complete cable	T, A	IEC:60332 Part-1	



TECHNICAL SPECIFICATION HT XLPE POWER CABLE RATE CONTRACT

PE-TS-999-507-E001 Issue No: 01 Rev. No. 00 Date :22.01.2025

PACKING REQUIREMENT

Sl.no	DESCRIPTION
1	Type of Packing (Wood/ Steel): Steel
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 IMM ALL DIMENSIONS AND VALUES ARE TYPICAL AND ARE DEPENDENT ON CABLE WEIGHT. A. PLANSE B. MARPEL C. GENTRAL HOLE D. PLANSE E. TRANSEBE F. GROSS WIGHTH G. STUD SECS
2	Quality of wood:
	As per IS 10418 for wooden drums
3	Cushioning material and moisture absorber:
	Not applicable
4	Packing slip & holder:
4.1	Packing slip kept in polyethylene bag shall be placed inside the cable drum at appropriate place.
4.2	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 HT XLPE POWER CABLE RATE CONTRACT

PE-TS-999-507-E001 Issue No: 01 Rev. No. 00 Date :22.01.2025

DOCUMENTATION REQUIREMENT

DRA	DRAWINGS & DOCUMENTS TO BE SUBMITTED BY ALL THE BIDDERS ALONG WITH THE BID				
SI. No.	DOCUMENT TITLE				
1	PQR CREDENTIALS ALONG WITH FILLED "Sub-Qualifying Requirement of HT Cables" FORM				
2	COMPLIANCE SHEET				

DRAWINGS & DOCUMENTS TO BE SUBMITTED BY SUCC CONTRACT ALONG WITH SUBMISSI	
SL NO DOCUMENT TITLE	SUBMISSION SCHEDULE

SI. No.	DOCUMENT TITLE	SUBMI	DULE	
		Vendor submission (Days)*	BHEL Comment (Days)	Vendor submission (Days)#
I	Primary documents			
1	Datasheet and Cross Section Drawings for Power Cables (HT)	14	18	10
2	QAP for HT Power cables	14	18	10
II	Secondary documents			
1	Type Test Report for Power cable (HT)**	7\$	3	2
NOTES	:			

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

d) \$: 1st submission within indicated days 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				

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

c) Primary documents shall be considered for Delay analysis

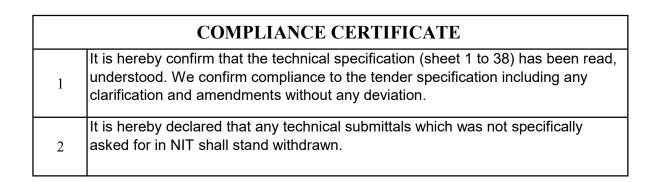


Date

TECHNICAL SPECIFICATION HT XLPE POWER CABLE RATE CONTRACT

PE-TS-999-507-E001 Issue No: 01 Rev. No. 00

Date: 22.01.2025



Signature of authorised Representative

Name and Designation:

Name & Address of the Bidder



TECHNICAL SPECIFICATION HT XLPE POWER CABLE RATE CONTRACT

PE-TS-999-507-E001 Issue No: 01 Rev. No. 00

Date: 22.11.2024

PRE QUALIFICATION REQUIREMENT (TECHNICAL)

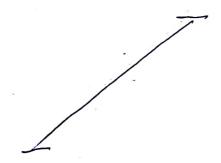


RATE CONTRACT (NTPC Variant)	PE-PQ-RC-507-E001	
PRE-QUALIFICATION REQUIREMENTS FOR	REVISION NO. 00 DATE 24/01/2025	
HT XLPE POWER CABLES	Page 1 of 1	

ITEMS:	ITEMS: HT XLPE POWER CABLE				
SCOPE	: Supply: YES; Erection & Commissioning: NO;				
1	Vendor should be a manufacturer of HT Cables.				
2	Availability of test reports on HT XLPE FRLS Power Cables to establish in-house capability to carry out all routine, type & acceptance tests as per relevant IS/International Standards.				
3	Capacity of manufacturing 40 km of HT XLPE Power Cables per month.				
4	Manufactured and supplied at least one (1) km of FRLS cables of any voltage level.				
5	Manufactured & supplied at least 50km of 6.35/11kV or higher voltage grade XLPE insulated power cables in one or more orders.				
6	Minimum two (2) nos. purchase orders for HT XLPE Power Cables shall be submitted which should not be more than five (5) years old from date of techno-commercial bid opening.				

Notes (General points of PQR):

- 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 & capacity of the bidder to perform the contract, should the circumstance warrant such assessment in the overall interest of BHEL.
- 4. After satisfactory fulfilment 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. Bidder to submit test reports as per PQR Clause No. 2 to establish vendor has in-house facility to conduct all tests including Impulse withstand test.
- 6. PQR 4 & 5 is in line with customer provenness criteria.



PREPARED BY

CHECKED BY

REVIEWED BY

APPROVED BY

MEGHA,
Sr. MANAGER

CHECKED BY

REVIEWED BY

APPROVED BY

Sub: Sub-Qualifying Requirement of HT Cables

(i)

(ii)

(iii)

(iv)

Manufactured

Rated voltage of cable

Type and size of Cable

Supplied

In support	of suppl	ier experien	ce a	s indica	ted ir	า Te	chnical	specification,	clause	no.	5.10	of :	Sub-
Section-IA,	Part-A,	Section-VI,	we	declare	that	the	supplie	er/sub-vendor	have	manı	ufactu	red	and
supplied the	e followir	ng cables.											

- (i) Atleast 50 Kms of XLPE insulated power cables of 6.35/11 KV or higher voltage grade, executed in one or more orders.
- (ii) Atleast one (1) Km of flame retardant low smoke cables of any voltage level.

()	· · · · · · · · · · · · · · · · · · ·
(A)	The details of above cables at (i) are given as under* :
SI.No.	Particulars
1.	Client name and its address, fax no. & telephone no.
2.	Name & Designation of the responsible person in client's organisation
3.	Name, Address, telephone no. & fax no. of the user of the cables
4.	Name & designation of the responsible person in user's organisation
5.	Contract No. and date
6.	Details of XLPE insulated power cables of 6.35/11 KV or higher voltage grade

Yes/No

Yes/No

..... KV

Signature of authorized signatory.....

SI.No.		Particulars	
	(v)	Total Quantity supplied	Km
7.	User'	s Certificate of Cable enclosed	
(B)	The o	details of above cables at (ii) are given as unde	
SI.No.		Particulars	
1.		t name and its address, o. & telephone no.	
2.	respo	e & Designation of the ensible person in client's nisation	
3.		e, Address, telephone no. & o. of the user of the cables	
4.	respo	e & designation of the ensible person in user's nisation	
5.	Contr	ract No. and date	
6.		ls of Flame Retardant Low se cables of any voltage level	
	(i)	Manufactured	Yes/No
	(ii)	Supplied	Yes/No
	(iii)	Rated Voltage of Cable	KV
	(iv)	Type and size of Cable	
	(v)	Total Quantity supplied	Km
7.	User'	s Certificate of Cable enclosed	
			Signature of authorized signatory

ATTACHMENT - 3K PAGE 321 OF 411

Date	:	(Signature)
Place	:	(Printed Name)
		(Designation)
		(Common seal)

Note:

- 1. Continuation sheets of like size and format may be used as per the Sub-vendor's requirement and shall be annexed to this Schedule.
- 2. Sub-vendor is required to attach necessary documents like copies of work order, completion certificates, agreements, drawings etc. in support of
 - * If the quantity ordered is less than 50 Km in one order than please furnish the details for other orders in same format.

Si	gna	ture	of	aut	hor	ized	S	igna	tory	/
----	-----	------	----	-----	-----	------	---	------	------	---



PRE - QUALIFYING REQUIREMENTS

PROJECT:	RATE CONTRACT
PACKAGE:	HT XLPE CABLES

CRITERIA FOR EVALUATION - FINANCIAL:

Amount (in Rs.)

Average annual financial turnover value during any three out of last six Financial Years as on tender due date should not be less than

14,76,00,000.00

Rs.Fourteen Crore Seventy Six Lakh only

Notes:-

- a) The bidder has to submit financial accounts (audited, if applicable comprising of Audit report, Balance Sheet, Profit & Loss A/c Statement and Notes/Schedules pertaining to Turnover/Sales/Revenue), for any three out of last six Financial Years (or from the date of incorporation, whichever is less) as on tender due date to review the above criteria. In case the incorporation of vendor is less than 3 years, average annual financial turnover shall be calculated based on available information as below:-
- i) If the accounts are available for <= 1 Financial Year, the Average Annual Turnover shall be calculated based on available information divided by 1 (One).
- ii) If the accounts are available for >1 but < = 2 Financial Years, the Average Annual Turnover shall be calculated based on available information divided by 2 (Two).
- iii) If the accounts are available for >2 but <= 3 Financial Years, the Average Annual Turnover shall be calculated based on available information divided by 3 (Three).
- b) Foreign bidder is to submit a latest report from reputed third party business rating agency like Dun & Bradstreet, Credit reform etc. in addition to the documents mentioned at point (a) above for review of above criteria.
- c) Other Income shall not be considered for arriving at Annual Turnover/Sales. For evaluation purpose, turnover figure excluding taxes shall be considered.
- d) For evaluation of foreign bidder, exchange rate (TT selling rate of SBI) as on scheduled date of tender opening (Part-I bid in case of two part bid) shall be considered.
- e)Bidder who is 50% or above subsidiary of any other company including those registered outside India and does not meet any of the above Financial Criteria, such bidder may be qualified based on credentials of its holding company provided such holding company meets the above PQR criteria. In such case, the Bidder would be required to furnish a Letter of Support from its Holding Company, pledging unconditional and irrevocable financial support for the execution of the Contract by the Bidder in case of award.
- f)In cases where audited results for the last financial year as on the date of Techno Commercial bid opening are not available, a Certificate would be required from CEO/CFO stating that the financial results of the Company are under audit as on the date of Techno-commercial bid opening and are not available.



PACKAGE: HT XLPE POWER CABLE PROJECT: FRAMEWORK AGREEMENT (RATE CONTRACT) Bidder Name:

	Item description	Unit	Order Quantity (Metres)	Drum No's X Length (Meters)	UNIT PRICE (EX- WORKS) (Rs)	TOTAL PRICE (EX- WORKS) (Rs)	CHARGES (EXCLUDING GST) @ % OF TOTAL EX- WORKS	FREIGHT CHARGES EXCLUDING GST (INR)	Applicable GST Rate % (on "Total Ex-Works +Freight")	GST (INR)	TOTAL F.O.R. SITE PRICE (INR)
	11/11 KV AL. CON	DUCTOR	/ XLPE INS	JLATED/ ARMO							
507-0270025-00-A	1C-630	MTR	271000	271 X 1000	#VALUE!	#VALUE!		#VALUE!		#VALUE!	#VALUE!
507-0270021-00-A	1C-500	MTR	60000	60 X 1000	#VALUE!	#VALUE!		#VALUE!]	#VALUE!	#VALUE!
507-0270009-00-A	1C-240	MTR	70000	70 X 1000	#VALUE!	#VALUE!		#VALUE!		#VALUE!	#VALUE!
507-0270033-00-A	3C-185	MTR	197250	263 X 750	#VALUE!	#VALUE!		#VALUE!]	#VALUE!	#VALUE!
	3.3/3.3 KV AL. CO	NDUCTO	R/ XLPE IN	SULATED/ ARM	OURED/ UNEARTHED G	RADE POWER CABLE					
507-0270045-00-A	1C-150	MTR	16000	16 X 1000	#VALUE!	#VALUE!	0	#VALUE!] , [#VALUE!	#VALUE!
507-0270077-00-A	3C-185	MTR	39000	52 X 750	#VALUE!	#VALUE!	U	#VALUE!] "	#VALUE!	#VALUE!
507-0270073-00-A	3C-150	MTR	129750	173 X 750	#VALUE!	#VALUE!		#VALUE!		#VALUE!	#VALUE!
					GRAND TOTAL (Rs.)	X					
5	507-0270025-00-A 507-0270021-00-A 507-0270009-00-A 507-0270003-00-A 507-0270045-00-A 507-0270077-00-A	507-0270025-00-A 1C-630 507-0270021-00-A 1C-500 507-0270009-00-A 1C-240 507-0270033-00-A 3C-185 3.3/3.3 KV AL. CO 507-0270045-00-A 1C-150 507-0270077-00-A 3C-185	507-0270025-00-A 1C-630 MTR 507-0270021-00-A 1C-500 MTR 507-0270009-00-A 1C-240 MTR 507-0270033-00-A 3C-185 MTR 3.3/3.3 KV AL. CONDUCTO 507-0270045-00-A 1C-150 MTR 507-0270077-00-A 3C-185 MTR	507-0270025-00-A 1C-630 MTR 271000 507-0270021-00-A 1C-500 MTR 60000 507-0270009-00-A 1C-240 MTR 70000 507-0270033-00-A 3C-185 MTR 197250 3.3/3.3 KV AL. CONDUCTOR/ XLPE IN: 507-0270045-00-A 1C-150 MTR 16000 507-0270077-00-A 3C-185 MTR 39000	507-0270025-00-A 1C-630 MTR 271000 271 X 1000 507-0270021-00-A 1C-500 MTR 60000 60 X 1000 507-0270009-00-A 1C-240 MTR 70000 70 X 1000 507-0270033-00-A 3C-185 MTR 197250 263 X 750 507-0270045-00-A 1C-150 MTR 16000 16 X 1000 507-0270077-00-A 3C-185 MTR 39000 52 X 750 507-0270073-00-A 3C-150 MTR 129750 173 X 750	507-0270025-00-A 1C-630 MTR 271000 271 X 1000 #VALUE! 507-0270021-00-A 1C-500 MTR 60000 60 X 1000 #VALUE! 507-0270009-00-A 1C-240 MTR 70000 70 X 1000 #VALUE! 507-0270033-00-A 3C-185 MTR 197250 263 X 750 #VALUE! 3.3/3.3 KV AL. CONDUCTOR/ XLPE INSULATED/ ARMOURED/ UNEARTHED G 507-0270045-00-A 1C-150 MTR 16000 16 X 1000 #VALUE! 507-0270077-00-A 3C-185 MTR 39000 52 X 750 #VALUE!	1C-500 MTR 60000 60 X 1000 #VALUE! #VALUE! #VALUE! 507-0270009-00-A 1C-240 MTR 70000 70 X 1000 #VALUE! #VALUE! #VALUE! 507-0270033-00-A 3C-185 MTR 197250 263 X 750 #VALUE! #VALUE!	11/11 KV AL. CONDUCTOR/ XLPE INSULATED/ ARMOURED/ UNEARTHED GRADE POWER CABLE	11/11 KV AL. CONDUCTOR/ XLPE INSULATED/ ARMOURED/ UNEARTHED GRADE POWER CABLE	11/11 KV AL. CONDUCTOR/ XLPE INSULATED/ ARMOURED/ UNEARTHED GRADE POWER CABLE	11/11 KV AL. CONDUCTOR/ XLPE INSULATED/ ARMOURED/ UNEARTHED GRADE POWER CABLE

- 1 Bidder to quote grand total value of the complete package (Rs X) only as per the BOQ above. The item wise break up of total price and unit price shall be derived as per the formulae indicated above.
- 2 Bidder to quote freight charges in percentage of their quoted Total Ex-works Prices. Bidder to give single % of freight charges considering anywhere in India in the freight column. Bidders have to give same % of freight for each line item. Further, bidder to quote non-zero freight %.
- 3 Tolerance on individual drum length shall be ±5%.
- 4 Overall tolerance on total dispatched quantity of each size shall be (-) 2% and (+) 0% on Individual Purchase Order against Rate Contract. Cables consumed for testing and inspection shall be to bidder's account.
- 5 For each individual cable size, one short length of not less than 250 m may be accepted only in the final drum length to complete the supply (except where the total ordered quantity is one single drum length). The overall tolerance limits stipulated above shall continue to apply (in case short lengths are accepted).
- 6 Unit price of cables quoted by bidder shall be inclusive of type test charges. No separate charges shall be payable for type tests.
- 7 PVC shall be applicable as per PVC formula & PVC factors mentioned in Annexure -B. Upper ceiling limit is (+)20% & no negative ceiling limit.

ANNEXURE-B PVC FORMULA & PVC FACTORS for HT XLPE CABLES

1. Price variation formula for Aluminium conductor XLPE insulated 3.3 to 33 kV SINGLE Core Armoured power cables

P = Po + AIF (AI – Alo) + XLFAL(CC-Cco)+ SMIFS (SMIF1-SMIF0) + CCFAI (PVCc – PVCco) For Single Core unarmoured cables Aluminium factor (AIF) shall be referred from Table ALP

Table References:

ALP Aluminium conductor Factor in single core (for unarmoured cable); AIF

H1 Aluminium Armour Factor for Armour with Al Cond.

H2(a) XLPE Compound Factor; XLFAI H3(a) Copper Tape Factor; SMIFS

H5(a) Polymer factor for Single core cable ; CCFAI

Note: For cases where specific Earth Fault Current through Screen is required, Screen area as approved by the customer in Datasheet/Earth Fault Current calculation of Screen shall be used to derive SMIF as below:

If A= Area of Metallic Screen in Approved Datasheet / Calculation Sheet

D= Density= 8.89 for Cu. & 2.703 for Al; LF = Lay Factor (=1.07, for Copper Wire Metallic Screen and counter helixtape)

SMIF = $(A \times D \times LF)/1000$

2. Price variation formula for Aluminium conductor XLPE insulated 3.3 to 33 kV THREE Core Armoured power cables

P = Po + AIF (AI – Alo) + XLFAL(CC-Cco)+ SMIF (SMIF1-SMIF0) + FeF(FeF1-FeF0) + CCFAI (PVCc – PVCco) For unarmoured Three Core cables, Steel Armour factor (FeF for Strip & FeW for Wire) shall be 0

Table References:

ALP Aluminium conductor Factor in three core; AlF

H2(b) XLPE Compound Factor; XLFAI
H3(b) Copper Tape Factor; SMIFS
H4(b) Steel Strip Armour Factor; FeF
H4(c) Steel Wire Armour; FeW

H5(b) Polymer factor for Three core cable ; CCFAI

Note: For cases where specific Earth Fault Current through Screen is required, Screen area as approved by the customer in Datasheet/Earth Fault Current calculation of Screen shall be used to derive SMIF as below:

If A= Area of Metallic Screen in Approved Datasheet / Calculation Sheet

D= Density= 8.89 for Cu. & 2.703 for Al; LF = Lay Factor (=1.07, for Copper Wire Metallic Screen and counter helixtape)

SMIF = $(A \times D \times LF)/1000$

PVC FACTORS

Sr. No.	Item code	Item description	AlF	CCFAI	FeF	XLFAI	SMIFS			
1.0	11/11 KV AL. COND	UCTOR/ XLPE INSU	JLATED/ A	RMOURE	D/ UNEAR	THED GRA	ADE POWER CABLE			
1.1	507-0270025-00-A	1C-630	2.580	0.873	0.000	0.777	0.000			
1.2	507-0270021-00-A	1C-500	2.110	0.809	0.000	0.694	0.000			
1.3	507-0270009-00-A	1C-240	1.139	0.558	0.000	0.519	0.000			
1.4	507-0270033-00-A	3C-185	1.605	3.028	1.259	1.468	As per Formula in Note of S.No. 2 above			
S.No. 2 above										
2.0	3.3/3.3 KV AL. CON	DUCTOR/ XLPE INS	ULATED/	ARMOUR	D/ UNEA	RTHED GF	RADE POWER CABLE			
2.1	507-0270045-00-A	1C-150	0.678	0.389	0.000	0.229	0.000			
2.2	507-0270077-00-A	3C-185	1.605	2.086	1.055	0.784	As per Formula in Note of S.No. 2 above			
2.3	507-0270073-00-A	3C-150	1.279	1.906	0.966	0.719	As per Formula in Note of S.No. 2 above			

	COST OF WITHDRAWAL												
PROJECT:-						Framework Agreement (Rate Contract)							
PACKAGE :-						HT XLPE CABLES							
TENDER ENQUIRY :-													
NAME OF	THE BIDDER												
SI. No.	Volume/ Section	Page No.	Clause No.	Technical Specification/Tender Document No	Complete Description of Deviation	Cost of withdrawal of deviation to be entered by the bidder in	Reference of price Schedule of which Cost of Withdrawal of Deviation is applicable	Nature of cost of withdrawal of deviation (Positive/Negative)	Reasons for quoting deviation				
1	TECHNIC	AL DEVIA	TION										
1.01													
1.02													
1.03													
1.04													
1.05													
2	COMMER	CIAL DEV	IATION										
2.01													
2.02													
2.03													
2.04													
2.05													



CORPORATE QUALITY ASSURANCE/ कॉरपोरेट गुणवत्ता आश्वासन MAIN CONTRACTOR'S PROPOSAL CUM EVALUATION REPORT मुख्य संविदाकार प्रस्ताव सह मुल्यांकन रिपोर्ट

Ref No	o:					Do	ate:				
संदर्भ	सं.:					ति	थिः				
i.	Main Cor	ntractor									
	मुख्य संवि	दाकार									
ii.	Project [™]										
iii.	Package	Name						Package No			
	पैकेज का							पैकेज सं.			
iv.	Propose	d Item/Scope	of Sub-c	ontracting							
	उप-संविद	ा(अनुबंध) का प्र	ग्रस्तावित म	ाद/ दायरा							
v.		ered under		edule-1			_	er contract c			
	निम्नर्लि। शामिल म	खेत के अंतर्गत -	/3/7	(सूची- 1			अनुबंध	ध के अनुसार	खंड सं -		
	रागमल म	G	Sche	edule-2 अनुसूची-	-2						•
vi.											
	If item is	Schedule-1 a	and prop	osed sub-vendo	r is						
	indigeno	us, Main Con	tractor t	to explain how t	he						
	contract	ual provisior	ne will hø	fulfilled							
		_									
				वित उप-विक्रेता स्व	वदेशी						
		य संविदाकार व									
vii.		न्तंश के पातशा रो 4 वर्षण्यक वर्ष				/	— па	· ਕੇਂਟਾ ਜਾ ਜਾ			
	Name an	a Aaaress oj	ine prop	oosed Sub-vendo	r s work	(3 / 9 ((1) (ात साथ	=पऽर का नाम	। तथा पता		
viii.				nanufacturing (i							
			/ एल- 2 न	टिवर्क के अनुसार वि							
ix.	Item Des	cription ze/Rating/S	cope of	Total quantity proposed item		Quantit procure	•	oosed to be from			or quantity requirements ect schedule & whether the
	Sub-Cont			envisaged in t	his	propose	ed s	ub-vendor	propose	ed S	ub-vendor equipped with
		वरण (प्रकार / :		package (Nos Running Mete		(Nos/ /Kgs	Runnii Tol/	ng Meters ns etc)			apacity to supply proposed tity in time
	/ रेटिंग / उ	उप-अनुबंध का	दायरा)	Kgs/ Tons etc)	-		•	क्रेता (संख्या			तमय सूची के अनुसार मात्रा
				। पैकेज में परिकर्ति			ाशील	मीटर /			ों के लिए समय-सीमा और क्या
				प्रस्तावित मद की				न आदि) से			-विक्रेता समय पर प्रस्तावित मांग
		मात्रा (संख्या /				खरीदी ज					आपूर्ति करने में पूरी तरह से
				क्रियाशील मीटर	/				सक्षम है		
					<u> </u>						
X.	Supply e.	xperience of	the prop	osed sub-vendo	r (includ	ding supp	lies to	Main Contr	actor, if	any)) for similar item/scope of
	sub-cont	racting, for l	ast 3 yea	rs (Note:- Only r	elevant	experien	ce deta	ails w.r.t. pro	oposed it	em/	scope of subcontracting to
	be broug	ht out here)	पिछले 3	वर्षों के लिए उप	ग-अनुबंध	र के समाव	न मद	/ दायरे के लि	नेए प्रस्ता	वित	सब-वेंडर (मुख्य संविदाकार

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	हेतु आपूर्ति, यदि कोई हो, सहित) का आपूर्ति अनुभव (नोट: - उप-अनुबंध के प्रस्तावित मद / दायरे के संबंध में केवल प्रासंगिक									
	अनुभव के विवरण का उल्लेख हो									
	Project/Package परियोजना/पैकेज	Customer Name ग्राहक का नाम	Supplied Item (Type/Rating/Model /Capacity/Size etc) आपूर्त्तित मद (प्रकार/रेटिंग /मॉडल /क्षमता/आकार आदि)	no/date पीओ संदर्भ सं. /तिथि	Supplied Quantity आपूर्ति की मात्रा	Date of आपूर्ति व				
We cor	ıfirm that as per our phy	sical assessment, the pr	oposed sub-vendor has requ	isite capabilit	ies & supply e	xperienc	e and is			
suitab	le for supplying the prop	oosed item/scope of sub	-contracting/हम अपने आक	लन के अनुसार	इस बात की '	पुष्टि कर	ते हैं कि,			
प्रस्तावि	वेत उप-विक्रेता के पास अ	नेक्षित क्षमता और आपूर् <u>त</u> ि	ं करने का अनुभव है और उप-	अनुबंध के दाय	रे /प्रस्तावित म	नंद की अ	ापूर्ति के			
	प्रयुक्त है।			•						
Name:		Desig:	Contact No:	Sign:		Date:				
नाम:		पद:	दूरभाष सं.:	हस्ताक्षर:		तिथि:				

Company's Seal/Stamp:- कंपनी का मुहर:-

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i.	Item/Scope of Sub-contracting						
	उप-संविदा(अनुबंध) का मद/ दायरा						
ii.	Address of the registered office पंजीकृत कार्यालय का	नता Details of Contact Person संपर्क ट्यक्ति का विव	्ण				
		(Name Decimation Mobile Email) (AIII III	(Name, Designation, Mobile, Email) (ਗ਼ਸ, ਧਫ਼ਗ਼ਸ,				
			मोबाइल, ईमेल)				
		माबाइल, इमल)					
iii.	Name and Address of the proposed Sub-vendor's w	Details of contenees or some the first in the	रण				
	where item is being manufactured प्रस्तावित उप-विवे		नाम				
	कार्यों का नाम और पता, जहां मद का निर्माण किया जा रहा है 	मोबाइल, ईमेल)	11-1,				
		ं । जाउस, इंगरा)					
4	Annual Production Capacity for proposed item/scc	and of					
iv.	Annual Production Capacity for proposed item/scc sub-contracting उप-संविदा(अनुबंध) के प्रस्तावित मद / द	· · ·					
	लिए वार्षिक उत्पादन क्षमता	14(4)					
v.	Annual production for last 3 years for proj	posed					
	item/scope of sub-contracting उप-संविदा(अनुबंध	ा) के					
	प्रस्तावित मद / दायरे के लिए पिछले 3 वर्षों का वार्षिक उत्पा	दन					
vi.	Details of proposed works प्रस्तावित का	र्यों का विवरण					
1.	Year of establishment of present works वर्तमान फैक्टरी	की					
	Tenner at an						
2.	Year of commencement of manufacturing at above wor उपरोक्त फैक्टरी में निर्माण कार्य शरू होने का वर्ष	KS					
3.	Details of change in Works address in past (if any पूर्व	``					
٠.	· ·						
4.	फैक्टरी स्थल में परिवर्तन का विवरण (यदि कोई हो)) Total Area कल क्षेत्र						
, , .	Total Area फुल दात्र Covered Area शामिल क्षेत्र	i i					
5.	Factory Registration Certificate फैक्टरी पंजीकरण प्रम	ण Details attached at Annexure – F2.1 विवरण					
	पत्र	अनलग्नक- एफ 2.1 पर संलग्न है					
6.			is				
		per Main Contractor/purchaser aesign)					
	और विकास सेटअप (No. of manpower, their qualific						
	machines & tools employed etc.) (श्रमिकों की संख्या,		<u>નુષ્</u> ય				
	योग्यता, मशीन और उपलब्ध उपकरण आदि)	संविदाकार / खरीददार के डिजाइन के अनुसार है)					
		विवरण अनुलग्नक -एफ २.२ पर संलग्न है ।					
		(यदि लागू हो)					
7.	Overall organization Chart with Manpower Details	Details attached at Annexure – F2.3 विवरण					
		थनवरनक हा २ में मंबरन है।					

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	(Design/Manufacturing/Quality etc) मैनपावर विवरण के	
	साथ समग्र संगठन का चार्ट(डिजाइन / विनिर्माण / गुणवता	
8.	After sales service set up in India, in case of foreign sub-	Applicable / Not applicable लागू / लागू नहीं
	vendor(Location, Contact Person, Contact details etc.) भारत	
	में बिक्री सेवा की स्थापना के बाद, विदेशी उप-विक्रेता के	Details attached at Annexure – F2.4 विवरण
	मामले में(स्थल , संपर्क व्यक्ति, संपर्क विवरण आदि)	अन्लग्नक -2.4 पर संलग्न है ।
9.	Manufacturing process execution plan with flow chart indicating various stages of manufacturing from raw material to finished product including outsourced process, if	Details attached at Annexure — F2.5 विवरण अन्लग्नक - F2.5में संलग्न है ।
	any फ्लोचार्ट सहित विनिर्माण प्रक्रिया निष्पादन योजना , जिसमें	
	आउटसोर्स प्रक्रिया, यदि कोई हो, सहित कच्चे माल से तैयार	
	उत्पाद तक विनिर्माण के विभिन्न चरणों को दर्शाया गया हो,	
10.	Sources of Raw Material/Major Bought Out Item कच्चे माल	Details attached at Annexure – F2.6 विवरण
	के स्रोत / खरीदे हए मख्य मद	अनलग्नक - F2.6में संलग्न है।
11.	Quality Control exercised during receipt of raw	Details attached at Annexure – F2.7 विवरण
	material/BOI, in-process , Final Testing, packing कच्चे माल	अनुलग्नक - F2.7 पर संलग्न है
	/ खरीदे हुए मद, प्रक्रियाबद्ध, अंतिम परीक्षण, पैकिंग करते	
12.	ममरा माणवना निरांचण Manufacturing facilities	Details attached at Annexure – F2.8 विवरण
	(List of machines, special process facilities, material handling etc.) विनिर्माण स्विधा(मशीनों की सूची , विशेष प्रक्रिया स्विधाएं,	अनुलग्नक - F2.8में संलग्न है ।
	सामग्री रख-रखाव आदि)	5
13.	Testing facilities (List of testing equipment)	Details attached at Annexure – F2.9 विवरण
	परीक्षण सुविधाएं(परीक्षण उपकरण की सूची)	अनुस्तक १२ ० में मंजूद है।
14.	If manufacturing process involves fabrication then- यदि	Applicable / Not applicable लागू / लागू नहीं
	निर्माण प्रक्रिया में फेब्रिकेशन की गई है तो-	Details attached at Annexure – F2.10 विवरण
	List of qualified Welders पात्र वेल्डर की सूची List of qualified NDT personnel with area of specialization	अनुलग्नक - F2.10में संलग्न है।
	विशेषज्ञता के क्षेत्र सहित पात्र एनडीटी कार्मिकों की सूची	(if applicable) लाग् / लाग् नहीं
15.	List of out-sourced manufacturing processes with Sub-	Applicable / Not applicable लागू / लागू नहीं
	Vendors' names & addresses सब-वेंडर द्वारा बाह्य स्रोतों	
	(उनके नाम और पते सहित)से करवाएं गए निर्माण प्रक्रियाओं	Details attached at Annexure. –F2.11 विवरण
	की सूची	अनुलग्नक - F2.10में संलग्न है।
		(if applicable) (यदि लागू हो)
16.	Supply reference list including recent supplies नवीनतम	Details attached at Annexure – F2.12
	आपूर्ति सहित आपूर्ति संदर्भ सूची	विवरण अनुलग्नक - F2.12 में संलग्न है
		(as per format given below) (नीचे दिए गए प्रारूप के
		<u> 21=111.7 </u>

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Project packag परियो /पैकेज	e जना	Customer Name ग्राहक का नाम	Supplied Item (Type/Ratin /Capacity/Size etc) आपूर्ति वस्तु (प्रकार / रेटिंग / क्षमता / आकार आदि)	र्ते की गई		no/date पीओ सं. / तिथि	Supplied Quantity आपूर्ति की मात्रा	Date of Supply आपूर्ति की तारीख
17.	Product satisfactory performance feedback letter/certificates/End User Feedback उत्पाद के संतोषजनक प्रदर्शन संबंधी फीडबैक पत्र / प्रमाण पत्र / अंतिम उपयोगकर्ता				Attached at a संलग्न है	annexure - F2.13 3	न्तुलग्नक F2. 3पर	
18.				Applicable /	<i>Not applicable</i> लागू	् / लागू नहीं		
	रेटिंग वाले) के लिए टाइप टेस्ट रिपोर्ट (टाइप टेस्ट विवरण, रिपोर्ट			Details attached at Annexure – F2.14 विवरण				
	संख्या, एजेंसी, जांच की तारीख) का सारांश नोट: - रिपोर्ट प्रस्तुत करने की आवश्यकता नहीं है			अनुलग्नक - F2.1 4में संलग्न है (if applicable) (यदि लागू हो)				
19.	Note:- Reports need not to be submitted 19 Statutory / mandatory certification for the proposed product					- / 0		
19.	प्रस्तावित उत्पाद के लिए वैधानिक / अनिवार्य प्रमाणीकरण			Applicable /	Not applicable लागू	् / लागू नहा		
	ACCURACY OF THE PROPERTY OF TH			Details attached at Annexure – F2.15				
				(if applicable) (यदि लागू हो)				
20.	Copy of ISO 9001 certificate आईएसओ 9001 प्रमाण पत्र की			Attached at Annexure – F2.16 अन्लग्नक में संलग्न -				
	प्रति (if available(यदि उपलब्ध हो)		F2.1 6 है					
21.	Product technical catalogues for proposed item (if available)		Details attached at Annexure – F2.17 विवरण					
	प्रस्तावित मद के लिए उत्पाद तकनीकी कैटलॉग (यदि उपलब्ध		अन्लग्नक - F2.1 7 में संलग्न है					
	हो)			Sign of the	172.1 / 01 (101001 6			
Name	:			Desig:		Sign	n:	Date:
नाम:				पदः		हस्त	<i>ना</i>	तिथि:
						क्षरः		

Company's Seal/Stamp:- कंपनी की मुहर / मोहर: -



BHEL / PEM / CMM SPECIAL CONDITIONS OF CONTRACT OF FRAMEWORK AGREEMENT (RATE CONTRACT)

SPECIAL CONDITIONS OF CONTRACT OF FRAMEWORK AGREEMENT (RATE CONTRACT) FOR HT XLPE CABLES

- 1. This tender is issued by BHEL PEM for Framework Agreement (Rate Contract) of HT XLPE CABLES required at various BHEL project sites on behalf of various BHEL units. Framework Agreement (Rate Contract) validity for ordering shall be two years from the purchase order for Rate Contract.
- 2. Framework Agreement (Rate Contract) shall be finalized only with suppliers who are registered with BHEL-PEM. Bidders who are not registered with BHEL-PEM (suppliers already registered with other BHEL Units shall also be required to apply registration in BHEL PEM) needs to apply & get registered for subject package with PEM before Reverse Auction & hence they need to apply online for registration on PEM web portal & have to enclose acknowledgement with the bid documents else their bid may not be considered for evaluation.

The bidders who are not registered with BHEL-PEM may apply for registration in BHEL-PEM through Registration Portal available at https://bhel.com/supplier-registration.

All credentials and/ or documents duly signed & stamped related to registration has to be uploaded on the website & submit the application for registration. One set of hard copy filled-up SRF downloaded from Online Registration Portal duly signed & stamped has to be submitted.

- 3. Framework Agreement (Rate contract) is proposed to be done with 3 suppliers in ratio of 45:30:25 value wise at L1 FOR site price (Ex-works + freight) for this package. However, order for a project shall not be split.
- 4. Quantity variation shall be applicable as +/- 30 % of the contract value. Bidders shall be informed that the quantities indicated in the tender are tentative quantities. No minimum quantity is guaranteed by BHEL.
- 5. This tender is issued by BHEL PEM for Framework Agreement (Rate Contract) of HT XLPE CABLES required at various BHEL project sites on behalf of various BHEL units. All bidders shall note the following: –
- a) As and when requirement arises, the concerned Purchase Department of respective BHEL unit will place order directly on the supplier against the Framework Agreement (Rate Contract).
- b) The drawings/ documents submission & approval, submission of Performance Security/ Performance Bank Guarantee, submission of invoices, processing and release of payment after supply of material, contractual dispute & commercial matters shall be dealt as per Framework Agreement (Rate Contract) contract terms & conditions directly by Purchase Department of respective BHEL unit which has placed purchase order against the Rate Contract..
- 6. Details of consignee and project site information for dispatch of material shall be intimated at the time of placement of PO for specific project after finalization of RC.
- 7. The items will be required against respective projects. Exact quantities and Project information shall be intimated while placing Purchase Order for a specific project based on the Rate Contract.
- 8. Price Variation shall be applicable for the subject package. Base date for initial prices for this tender shall be one month prior to date of NIT. All bidders shall quote as per the Price Variation Formulae provided in NIT.
- 9. Inspection of materials shall be carried out by BHEL/ CQA and or by Customer or by an Authorized Agency at manufacture's works before dispatch, if required. Dispatch of material to be done, only after receipt of BHEL/ Customer MDCC. It is responsibility of vendor to obtain Material Dispatch Clearance Certificate (MDCC) from BHEL or Customer as required before dispatch of material.



BHEL / PEM / CMM SPECIAL CONDITIONS OF CONTRACT OF FRAMEWORK AGREEMENT (RATE CONTRACT)

- 10. Vendor shall give inspection call on BHEL-CQS web site to applicable inspection agency with a copy of inspection call to BHEL for arranging Customer participation (if applicable) in inspection / Joint inspection on the proposed date with an advance notice of 15 working days. Inspection charges shall be paid by BHEL.
- 11. Items have to be manufactured as per specification and supplied strictly in accordance with the approved BHEL/ Customer's Drawings & Quality Plan. The items/ test certificate of items, which for any reason are not acceptable to BHEL/ Customer, shall be required to be retested. No extra charge shall be payable on those account by BHEL.
- 12. Other terms and conditions shall be as per Standard Technical specification No. PE-TS-999-507-E001, GCC Rev 07, Corrigenda 01 & Corrigenda 02 to GCC Rev 07 and Enquiry letter.
- 13. This Enquiry is subject to Conditions/ limits if any imposed in in BHEL-PEM PMD/ Vendor registration.
- 14. Tentative quantity is given in Enquiry.
- 15. Bidders to submit offer for RC of said items ONLINE via BHEL-GePNIC Portal only. Bidders to upload tender documents complete in all respects duly signed & stamped on each and every page by the authorized signatory of the bidder as a token of acceptance of all the terms and conditions of tender.
- 16. The Bidder along with its associate/ collaborators/ sub-contractors/ sub-vendor/ consultants/ service providers shall strictly adhere to BHEL Fraud Prevention Policy displayed on BHEL web site http://www.bhel.com and shall immediately bring to the notice of BHEL Management about any fraud as soon as it comes to their notice.

Tentative List of projects for Framework Agreement (Rate Contract) of HT XLPE CABLES

- 1. 2X800 MW LARA
- 2. 2X800 MW Singrauli STPP (NTPC)
- 3. 2X800 MW KODERMA
- 4. 1X800 MW SIPAT
- 5. 1X800 MW DARLIPALI
- 6. 2X660 MW RAGHUNATHPUR SG
- 7. 1X800 MW SINGARENI
- 8. 3X800 MW TELANGANA BTG

Format for Local Content Certificate as per MII order

Ref:	Date:
То,	
Bharat Heavy Electricals Limited	
PEM, PPEI Building,	
Plot No 25, Sector -16A	
Noida (U.P)-201301	
Reference: Tender Enquiry No	
Name of Package:	
Dear Sir,	
We hereby certify that items of	(Package name)
for(Project Name) offered by M/s	(bidder's name)
having its works/office at has	ocal content of%. Further,
it is also certified that the local content percentage (%) cert given in point no 2 of Public Procurement (Preference to Ma 45021/2/2017-PP(BE-II)-Part(4) Vol.II dated 04.06.2020 & 1	ake in India), Order 2017- revision, having ref. no. P
M/s qualifies as Class-I loca	al supplier.
Further, cost of locally imported items (inclusive of taxes) so	ourced locally from resellers/ distributors
is Rs and cost of licence/royalty paid/technical experti	se cost etc. source from outside of India
is Rs	
Details of the location(s) at which the local value addition-	
Yours very truly	
(Signing Authority Name & Sign)	
(Firm Name)	

Land Border Certificate

	Dated:
Tender Title:	
·)/2021-PPD, Ministry of Finance, Department of Expenditure, , confirn
and border with India and on sub-contra	ons on procurement from a bidder of a country which shares a cting to contractors from such countries; I certify that this is not from such a country.

Signature with Company seal

BANK GUARANTEE FOR PERFORMANCE SECURITY

Ban	ık Guarantee No:
Dat	e:
То	
NAME	
& ADDRESSES OF THE BENEFICIARY	
Dear Sirs,	
In consideration of <u>Bharat Heavy Electricals Limited</u> (hereinafter referred to	as the 'Employer' which expression
shall unless repugnant to the context or meaning thereof, include its s	successors and permitted assigns)
incorporated under the Companies Act, 1956 and having its registered office	e at through
its Unit at(name of the Unit) having awarded to (Name of the ${f V}$	<u>/endor / Contractor / Supplier)</u> with
its registered office at hereinafter referred to as the ' <u>Vendor / Cont</u>	ractor / Supplier ', which expression
shall unless repugnant to the context or meaning thereof, include its suc	ccessors and permitted assigns), a
contract Ref Nodatedvalued at Rs(Rupees	(in
words) for (hereinafter called the 'Contract') and t	he <u>Vendor / Contractor / Supplier</u>
having agreed to provide a Contract Performance Bank Guarantee, equivale	ent to% (Percent) of the said
value of the Contract to the Employer for the faithful performance of the Co	ntract,
we, (hereinafter referred to as the Bank), having registered/Head	office at and inter alia a
branch at being the Guarantor under this Guarantee, hereby, irrevoc	ably and unconditionally undertake
to forthwith and immediately pay to the Employer any sum or sums upto a r	maximum amount of Rs
(Rupees) without any demur, immediately on first dem	and from the Employer and without
any reservation, protest, and recourse and without the Employer needing to	prove or demonstrate reasons for
its such demand.	
Any such demand made on the Bank shall be conclusive as regards the am	ount due and payable by the Bank
under this guarantee. However, our liability under this guarantee shall be res	
Rs	

We undertake to pay to the Employer any money so demanded notwithstanding any dispute or disputes raised by the <u>Vendor / Contractor / Supplier</u> in any suit or proceeding pending before any Court or Tribunal, Arbitrator or any other authority, our liability under this present being absolute and unequivocal.

The payment so made by us under this Guarantee shall be a valid discharge of our liability for payment thereunder and the <u>Vendor / Contractor / Supplier</u> shall have no claim against us for making such payment.

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

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

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

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

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

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

This Ba	nk Guarantee shall be governed, construed and interpreted in accordance with t	the laws of India.
	atshall alone have exclusive jurisdiction over any matter arising out onk Guarantee	of or in connection with
		except with the previous
consen	t of the Employer in writing.	
Notwit	hstanding anything to the contrary contained hereinabove:	
a)	The liability of the Bank under this Guarantee shall not exceed	
b)	This Guarantee shall be valid up to	- 11 mi-alaba
c)	Unless the Bank is served a written claim or demand on or before	
	guarantee shall be forfeited and the Bank shall be relieved and discharged from	
	guarantee irrespective of whether or not the original bank guarantee is return	ed to the Bank.
We,	Bank, have power to issue this Guarantee under law and the	undersigned as a duly
authori	zed person has full powers to sign this Guarantee on behalf of the Bank.	
		For and on behalf of
		(Name of the Bank)
Dated		
Place o	f Issue	
¹ NAM	E AND ADDRESS OF EMPLOYER I.e Bharat Heavy Electricals Limited	
² NAM	E AND ADDRESS OF THE VENDOR /CONTRACTOR / SUPPLIER.	
³ DETA	ILS ABOUT THE NOTICE OF AWARD/CONTRACT REFERENCE	
⁴ CONT	TRACT VALUE	
	ECT/SUPPLY DETAILS MOUNT IN FIGURES AND WORDS	
⁷ VALIE	DITY DATE	

⁸ DATE OF EXPIRY OF CLAIM PERIOD

Note:

- 1. Bank Guarantee should be refunded to the contractor 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 the warranty under the contract.
- 2. The BG should be on Non-Judicial Stamp paper/e-stamp paper of appropriate value as per Stamp Act prevailing in the State(s) where the BG is submitted or is to be acted upon or the rate prevailing in the State where the BG was executed, whichever is higher. The Stamp Paper/e-stamp paper shall be purchased in the name of Vendor/Contractor/Supplier/Bank issuing the guarantee.
- 3. From Nationalized/Public Sector / Private Sector/ Foreign Banks can be accepted subject to the condition that the Bank Guarantee should be enforceable in the town/city or at nearest branch where the Unit is located i.e. Demand can be presented at the Branch located in the town/city or at nearest branch where the Unit is located.

Annexure-1

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
<u>Preamble</u>
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 Indian Penal Code 1860 and Prevention of Corruption Act 1988 or any other statutory penal enactment, or if there be a substantive suspicion in this regard, the Principal will inform its Vigilance Office and in addition can initiate disciplinary actions.

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

2.1 The Bidder(s)/ Contractor(s) commit himself to take all measures necessary to prevent corruption. 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 Indian Penal Code (IPC) and Prevention of Corruption Act; further the Bidder(s)/ Contractor(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
- 2.1.4 Foreign Bidder(s)/ Contractor(s) shall disclose the name and address of agents and representatives in India and Indian Bidder(s)/ Contractor(s) to disclose their foreign principals or associates. The Bidder(s)/ Contractor(s) will, when presenting his bid, disclose any and all payments he has made, and is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
 - 2.2 The Bidder(s)/ Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.
 - 2.3 The Bidder(s)/ Contractor(s) shall not approach the Courts while representing the matters to IEMs and 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)/ Cotractor (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 with any other company in any country conforming to the anti-corruption approach or with any other Public Sector Enterprise in India that could justify his exclusion from the tender process.
- 5.2 If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason 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 Sub-contracting, the Principal Contractor shall take the responsibility of the adoption of Integrity Pact by the Sub-contractor(s) and ensure that all Sub-contractors also sign the Integrity Pact.
- 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.
- 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 Secret/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 advisory role of IEMs is envisaged as that of a friend, philosopher and guide. The advice of IEMs would not be legally binding and it is restricted to resolving issues raised by a Bidder regarding any aspect of the tender which allegedly restricts competition or bias towards some Bidders. At the same time, it must be understood that IEMs are not consultants to the Management. Their role is independent in nature and the advice once tendered would not be subject to review at the request of the organization.
- 8.6 For ensuring the desired transparency and objectivity in dealing with the complaints arising out of any tendering process or during execution of Contract, the matter should be examined by the full panel of IEMs jointly, who would look into the records, conduct an investigation, and submit their joint recommendations to the Management.
- 8.7 The IEMs would examine all complaints received by them and give their recommendations/ views to the CMD, BHEL at the earliest. They may also send their report directly to the CVO, in case of suspicion of serious irregularities requiring legal/ administrative action. Only in case of very serious issue having a specific, verifiable Vigilance angle, the matter should be reported directly to the Commission. IEMs will tender their advice on the complaints within 30 days.
- 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 Indian Penal Code / Prevention of Corruption Act, and the CMD, BHEL has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Office, the 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. Issues like warranty/ guarantee etc. shall be outside the purview 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 till the final completion of contract for successful Bidder, and for all other Bidders 6 months after the Contract has been awarded. 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.
- 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.
- 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. 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. The fees/expenses on dispute resolution through mediation shall be shared by both the parties. Further, the mediation proceedings shall be confidential in nature and the parties shall keep confidential all matters relating to the mediation proceedings including any settlement agreement arrived at between the parties as outcome of mediation. Any views expressed, suggestions, admissions or proposals etc. made by either party in the course of mediation shall not be relied upon or introduced as evidence in any further arbitral or judicial proceedings, whether or not such proceedings relate to the dispute that is the subject of mediation proceedings. Neither of the parties shall present IEMs as witness in any Alternative Dispute Resolution or judicial proceedings in respect of the dispute that was subject of mediation.

For & On behalf of the Principal	For & On behalf of the Bidder/ Contracto		
(Office Seal)	(Office Seal)		
Place			
Date			
Witness:	Witness:		
(Name & Address)	(Name & Address)		

Clause on IP in the tender

Integrity Pact (IP)

(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.

SI	IEM	Email
1.	Shri Otem Dai, IAS (Retd.)	iem1@bhel.in
2.	Shri Bishwamitra Pandey, IRAS (Retd.)	iem2@bhel.in
3.	Shri Mukesh Mittal, IRS (Retd.)	iem3@bhel.in

- (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 below:

Details of contact person(s):

(1)	(2)
Name:	Name:
Deptt:	Deptt:
Address:	Address:
Phone: (Landline/ Mobile)	Phone: (Landline/ Mobile)
Email:	Email:
Fax:	Fax: