

DELIVERY SCHEDULE -3X660 MW NTPC NORTH KARANPURA PROJECT-ELECTRICAL LABORATORY EQUIPMENT PACKAGE								ANNEXURE-A
Sl. No.	Project Code	Package Name	BHEL Drawing No.	Drawing Title	Primary/Secondary	Drg. Sch for Vendor	Standard Delivery Terms for Supply Portion	Scope of Services and corresponding schedule for rendering the services
1	556-11000-A	ELECTRICAL LABORATORY EQUIPMENT	PE-V0-XXX-556-A001	Data sheet/GA of equipment with detailed BOM	Primary	R-0 within 21 days from PO & subsequent revisions within 10 days of comments received from BHEL. BHEL shall furnish comments / approval on each submission within 18 days from receipt.	Within Four (04) months from date of CAT-1 approval of Primary drawing/documents or BHEL manufacturing clearance whichever is later.  In case date of CAT-1 approval of Primary drawing/documents is later than the date of BHEL manufacturing clearance then for delay analysis, any delay in submission/re-submission of Primary drawing/documents shall be reduced from the given delivery period of 04 months. Delay in BHEL's comments/approval beyond 18 days shall also be considered for delay analysis.	<b>Demonstration at site:</b>  Vendor to depute its service engineer for respective site activity within 15 days from BHEL's intimation (for deputing service engineer) for such site activity.  For delay in deputing service engineer, LD on site activities portion shall be applicable @ ½% of the total site activities portion contract value (excluding element of taxes) per week or part thereof, with applicable GST. However, total LD (supply + site activities) shall be limited to 10% of cumulative total contract value excluding taxes and freight (supply + site activities).
			PE-V0-XXX-556-A002	CATALOGUE of equipment	Primary			
			PE-V0-XXX-556-A004	O & M Manual (IF APPLICABLE)	Secondary	within 30 days of issuance of MDCC		
			PE-V0-XXX-556-A003	CALIBRATION/TC	Secondary	Submission for issuance of MDCC	In case BHEL manufacturing clearance date is later than date of cat-1 approval of Primary drawing/documents, then for delay analysis submission/re-submission time of Primary drawing/document shall not be considered.	

**Bidders to comply the following terms for delivery :**

- The end period specified is for completion of the deliveries. Deliveries to start progressively so as to meet the completion schedule.
- The delivery conditions specified are for contractual LD purposes, however BHEL may ask for early deliveries without any compensation thereof.
- Non-applicable drawings shall be decided during bid evaluation.
- Wherever schedule of drawings/documents submission / re-submission is stipulated in the Technical Specification no.PE-TS-405-556-E005, REV. 00, same shall be superseded by delivery specified in NIT .

3 X 660 MW NORTH KARANPURA STPP  
PACKAGE- ELECTRICAL LABORATORY EQUIPMENT

ANNEXURE-B  
BOQ-CUM PRICE SCHEDULE

SL. NO.	ITEM CODE	ITEM DESCRIPTION	QUANTITY	UNITS	MAKE	MODEL NO.	UNIT EX- WORKS PRICE (Rs.)	TOTAL EX- WORKS PRICE (Rs.)
1	556-11084-A	Portable AC high voltage test kit, upto 50kv/100 mA	1	Nos				
2	556-11004-A	Fully automatic three phase dynamic relay test kit with necessary software for control and data storage	1	Nos				
3	556-11027-A	Fully automatic Battery impedance measurement test kit	1	Nos				

**NOTE :-**

1) EQUIPMENT TO BE SUPPLIED ALONG WITH ESSENTIAL ACCESSORIES FOR SUCCESSFUL OPERATION OF EQUIPMENT AT SITE .i.e. CLAMPS, CLIPS,LEADS ,CARRYING CASE etc.

2) ALL EQUIPMENTS SHALL BE SUPPLIED WITH VALID CALIBRATION CERTIFICATE, WHEREVER APPLICABLE.

3) ALL EQUIPMENT SHALL BE PROPERLY PACKED IN GALVANIZED SHEET STEEL TRUNK/ BOX WITH PROPER LOCK & KEY ARRANGEMENT EXCEPT FOR EQUIPMENT WHICH ARE TROLLEY MOUNTED OR ARE ALREADY AVAILABLE IN RUGGED STEEL/WOODEN BOX PACKING. FURTHER, ANY DAMAGE (READING ERROR/CALIBRATION ERROR/BROKEN PARTS/MISSING PARTS ETC) FOUND ON RECEIPT AT SITE, LEADING TO REPLACEMENT OF PARTS/WHOLE ITEM, SHALL BE TO BIDDER'S ACCOUNT.

750074/2022/PS-PEM-EL

C. NO. PE-PQ-405-556-E001



## PRE-QUALIFICATION REQUIREMENTS FOR

ELECTRICAL LAB EQUIPMENT  
3 X 660 MW NORTH KARANPURA STPP

REVISION NO. 0 DATE 21.02.22

SHEET NO. 1 OF 1

ITEMS : Electrical Lab Equipment

SCOPE: Supply : YES; Erection &amp; Commissioning : NO;

1	Vendor can be either OEM (Original Equipment Manufacturer) or Supplier of Electrical Lab equipment.
2	Vendor should have supplied Electrical Lab equipment to process plant/ refinery/ power plant/ nuclear plant / testing Lab.
3	Vendor should be in business of supplying electrical lab equipment for at least last two (2) years from the date of techno commercial bid opening.
4	Minimum two nos. purchase orders for electrical lab equipment shall be submitted which should not be more than 5 years old from the date of techno-commercial bid opening for establishing continuity in business.

## NOTES-

1. Consideration of offer shall be subject to customer's approval of bidders, if applicable.
2. Bidder to submit all supporting documents in English. If documents submitted by bidder are in language other than English, a self-attested English translated document should also be submitted.
3. Notwithstanding anything stated above, BHEL reserves the right to assess the capabilities and capacity of the bidder to perform the contract, should the circumstances warrant such assessment in the overall interest of BHEL.
4. After satisfactory fulfilment of all the above criteria/ pre-qualifying requirement, offer shall be considered for further evaluation as per NIT and all the other terms of the tender.

PREPARED BY

  
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REVIEWED BY

  
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**NTPC LTD**

**3 X 660 MW NORTH KARANPURA STPP**

**TECHNICAL SPECIFICATION  
FOR  
ELECTRICAL LAB EQUIPMENT**

**SPECIFICATION NO. : PE-TS-405-556-E005, REV. 0**



**BHARAT HEAVY ELECTRICALS LIMITED  
POWER SECTOR PROJECT ENGINEERING MANAGEMENT  
NOIDA, 201301**



3 X 660 MW NORTH KARANPURA STPP  
TECHNICAL SPECIFICATION  
FOR ELECTRICAL LAB EQUIPMENT

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**COMPLIANCE CERTIFICATE**


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**COMPLIANCE CERTIFICATE**

The bidder shall confirm compliance to the following by signing/ stamping this compliance certificate and furnishing same with the offer.

1. The scope of supply, technical details, construction features, design parameters etc. shall be as per technical specification & there are no exclusion/ deviation with regard to same.
2. There are no deviation with respect to specification other than those furnished in the 'schedule of deviations'
3. Only those technical submittals which are specifically asked for in NIT to be submitted at tender stage shall be considered as part of offer. Any other submission, even if made, shall not be considered as part of offer.
4. Any comments/ clarifications on technical/ inspection requirements furnished as part of bidder's covering letter shall not be considered by BHEL, and bidder's offer shall be construed to be in conformance with the specification.
5. Any changes made by the bidder in the price schedule with respect to the description/ quantities from those given in Annexure-A [BOQ-Cum-Price schedule] of the specification shall not be considered (i.e., technical description & quantities as per specification shall prevail).
6. All essential accessories for each electrical laboratory equipment required for testing various electrical equipment /devices during Commissioning, Operation and Maintenance of power plant to be ensured by bidder in their offer.

-----  
**BIDDER'S STAMP & SIGNATURE**

	<b>3 X 660 MW NORTH KARANPURA STPP TECHNICAL SPECIFICATION FOR ELECTRICAL LAB EQUIPMENT</b>	<b>Doc. No. PE-TS-405-556-E005</b>	
		<b>Volume</b>	<b>IIB</b>
		<b>Section</b>	<b>I</b>
	<b>SPECIFIC TECHNICAL REQUIREMENTS</b>	<b>Rev. : 00 DATE-23.02.22</b>	

## 1.0 SCOPE

- 1.1 Design, manufacture, inspection and testing at manufacturer's work, proper packing and delivery (as per NIT), demonstration and handling over to customer (wherever applicable) of Electrical Laboratory Equipment as mentioned in different sections of this specification.
- 1.2 General technical requirements of the Electrical Laboratory Equipment are indicated in Section – II. Project specific technical requirements/changes are listed in section-I.
- 1.3 Electrical Laboratory Equipment shall be supplied along with all essential accessories required for the successful operation of the equipment.
- 1.4 Detailed technical parameters of Electrical laboratory equipment are listed in Annexure – I of Section-I.
- 1.5 The requirement of section-1 shall prevail and govern in case of conflict between the corresponding requirements of Section-I and section-II.

## 2.0 BILL OF QUANTITIES

- 2.0.1 Quantity requirement shall be as per 'BOQ cum price schedule' enclosed in NIT.
- 2.0.2 Supplier to also give the following undertaking in the BOM: "The BoM provided herewith completes the scope (in content and intent) of material supply under PO No. -----, dated -----. Any additional material which may become necessary for the intended application of the supplied item(s)/package will be supplied free of cost in most reasonable time."

## 3.0 SPECIFIC TECHNICAL REQUIREMENT

S.No.	Reference Clause No. of Section-II (if any)	Specific Requirement/Change
1	CLAUSE 1.9	In addition to the clause 1.9 of section-II, Bidder to note that "During contract stage , if it is found that the offered model is not meeting the specification requirement , bidder shall offer higher model of same make meeting specification requirement without any techno-commercial implication to BHEL"



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Section

I

**Annexure-I of SECTION-I DETAILED TECHNICAL  
PARAMETERS**

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**1. Portable AC high voltage test kit, upto 50kV/100 mA**

**Quantity: 1 No.**

Make: Megger, Biddle or equivalent

Voltage Range: 0-50 kV AC

Current Range: 0-100 mA

It shall be suitable for testing Generator & associated bus duct.

**2. Fully automatic three phase dynamic relay test kit with necessary software for control and data storage**

**Quantity 1 No.**

Make: Doble, Omicron, Megger, Freja or Equivalent

Features-

- (i) The equipment shall be latest model with software full version (required for power plant applications) with license of atleast five years.
- (ii) Fully automatic three phase dynamic relay test kit
- (iii) Software for Control and data storage

**3. Fully automatic Battery impedance measurement test kit**

**Quantity: 1 No.**

Make : Megger, Omicron, Mpower or Equivalent

- capable of measuring and storing specific gravity of acid, temperature of cell etc. with data storage facility.
- Suitable to determine the condition of lead-acid batteries upto 1610 AH and nickel-cadmium batteries up to 760 AH.



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**SECTION-II**

**STANDARD TECHNICAL SPECIFICATION**



**TECHNICAL SPECIFICATION  
FOR  
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## 1.0 TECHNICAL REQUIREMENTS

- 1.1 Basic technical requirements for Electrical Lab Equipment shall be as indicated in this section, in addition to technical requirements specified in Section-I.
- 1.2 The intent of specification is not to specify herein all the details of design and manufacture. However, the equipment shall conform in all respect to high standards of design engineering and workmanship and shall be capable of performing in continuous commercial operation up to vendors guarantee.
- 1.3 The Bidder may note that the equipment range, rating, quantities as detailed herein, are the minimum requirement only. All accessories for the equipment not covered here, if necessary for satisfactory and trouble free operation of the equipment, shall be quoted by the Bidder.
- 1.4 The instrument shall be suitable for satisfactory operation at an ambient temperature from 0°C to 55°C.
- 1.5 The Analog instruments shall be provided with knife-edge pointer and anti – parallax mirror.
- 1.6 The Bidder to quote only 'one' make/model against each equipment best to suit specification requirement.
- 1.7 The instrument shall be suitable for hand held operation, rugged in construction and suitable for field use.
- 1.8 All the equipment components shall be procured from reputed manufacturers and make of equipment shall be subject to the approval of BHEL/ BHEL's Customer.
- 1.9 **Bidder to note that "In case any offered make / model becomes obsolete or is stopped manufacturing by manufacturer, next higher model of the same make may be considered for ordering / supply at contract stage, without any price implication. In such cases, bidder is required to furnish valid confirmation letter from OEM as proof of change of model (citing reason: obsolete technology or stopping of manufacturing with date of effect) and that the offered model is "technically equivalent or better".**

## 2.0 CODES AND STANDARDS

Some of the standards, which shall generally be followed, are listed below. Other applicable relevant standards for any component part, even if not covered in listed standards shall be followed.

- i) IS – 6103 Method of test for specific resistance (resistivity) of electrical insulating fluid.
- ii) IS – 6700 Requirements of general purpose Cathode Ray Oscilloscope.
- iii) IS – 722 Specification for AC electricity meters.
- iv) IS – 8143 Specification for plugs & keys for resistance boxes.
- v) IS – 6104 Method of test for interfacial tension of oil against water.
- vi) IEC-51 Direct acting indicating analogue electrical measuring instruments and their accessories.
- vii) Any other relevant National/ International standards as mentioned in Section-II with technical specification.

## 3.0 DESIGN CRITERIA:

- 3.1 Electrical Laboratory Equipment shall be used for calibration & diagnostics of various electrical equipment/ devices during Commissioning, Operation and Maintenance of power plant.
- 3.2 The Equipment will be kept in a clean but hot, humid and tropical atmosphere when not in use. Equipment will be placed in dust laden, hot, humid atmosphere during its use.



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3.3 For continuous operation at specified rating, temperature rise of various equipment/ components shall be limited to the permissible value stipulated in the relevant standards and this specification.

**4.0 TEST REQUIREMENTS:**

4.1 All equipment to be tested as per latest edition of relevant standards. Further, testing shall include verification of physical, functional & technical parameters of equipment & accessories, in line with approved datasheet.

4.2 The tests shall be carried out by the vendor at in-house lab/ OEM lab/ Third party govt. accredited lab. Charges for all these tests shall be deemed to be included in the bid price.

4.3 Vendor to furnish test report to BHEL for review/ acceptance. BHEL/BHEL's customer may witness the testing of equipment.

**5.0 PACKING:**

All equipment shall be properly packed in Galvanized sheet steel trunk/ box with proper lock & key arrangement except for equipment which are trolley mounted or are already available in rugged steel/wooden box packing. Further, any damage (reading error/calibration error/broken parts/missing parts etc) found on receipt at site, leading to replacement of parts/whole item, shall be to bidder's account.

**6.0 DEMONSTRATION TO BHEL / BHEL'S CUSTOMER**

6.1 The vendor shall be responsible for demonstration of the supplied equipment at site, conforming the satisfactory operation.

6.2 The equipment for which demonstration is required at site shall be intimated by BHEL.

6.3 The charges for visit to site for demonstration at site shall be in-line with Annexure- I of Section-II.

**7.0 PERFORMANCE GUARANTEE**

The bidder shall guarantee that the equipment offered shall meet the requirement as stipulated in this specification and as confirmed by them in Technical Data Sheet. In case the performance of equipment is not as per performance guarantee, the bidder will have to replace the equipment at site free of cost.

**8.0 DRAWING DATA & MANUAL**

8.1 To be submitted with the bid as technical offer:

- a) Compliance to Technical parameters of various equipment as specified in Annexure-I of Section-I in Data Sheet – B (as enclosed).
- b) Technical leaflets/ Catalogues/Product Manual of the Equipment

The Bidder may note that the drawing, data and manual listed herein are minimum requirement only. The Bidder shall ensure that the other necessary write-ups, curves and information required to fully describe the equipment are submitted with the bid.

8.2 Following documents/drawings shall be submitted after placement of order for BHEL & customer's approval:

- a) Technical Datasheet for each equipment
- b) Technical leaflets/ Catalogues/Product Manual of the Equipment



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- c) Tests Reports and calibration certificate
- d) General arrangement drawing showing constructional features, accessories, connections, range and rating, mounting arrangement, space requirement etc.
- e) Detail instructions for application, assembly & testing of equipment.
- f) Wiring and schematic diagrams (if applicable).
- g) Instruction manual/ O&M manual of individual equipment

**8.3 Instruction manual/O&M Manual of individual equipment**

The manual shall clearly indicate in English the installation and connection method, check list of the tests to be carried out before commissioning of equipment. Maintenance and Calibration method shall also be provided in the manual.

**8.4 Bidder to furnish all user instruction manuals, maintenance, handling, installation manuals & all test reports complete in all respect in bound volumes & soft copies to BHEL / BHEL's customer at the time of handing over the same to BHEL / BHEL's Customer.**

**8.5 Bidder to note that quoted item cost shall include cost of main item, cost of all accessories required for successful operation of equipment and testing cost of all equipment test as per relevant standard.**



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II

**ANNEXURE-I OF SECTION – II  
DEMONSTRATION & HANDING OVER CHARGES**

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**SCHEDULE OF PRICES FOR DEMONSTRATION & HANDING OVER TO  
BHEL / BHEL'S CUSTOMER**

SL. NO.	DETAILS	ACTIVITY	UNIT CHARGES
1	LUMP SUM ALL INCLUSIVE CHARGES PER VISIT FOR EXPERIENCED / CAPABLE ENGINEER (EXCEPT DAILY CHARGES)	1 VISIT	20000/-
2	LUMP SUM ALL INCLUSIVE CHARGES FOR EXPERIENCED / CAPABLE ENGINEER PER DAY	1 DAY	5000/-

**Note:**

1. TOTAL CHARGES = (Charges as per S.No.1) + [No. of Days(\*) x Unit Charges as per Sl. No. 2]
- \*: To be certified by BHEL site
2. Bidder to note that provision of maximum 1 visit amounting to total 4 man days is envisaged for respective bidders.

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TECHNICAL SPECIFICATION FOR ELECTRICAL LABORATORY EQUIPMENT							
PE-TS-405-556-E005							
DATA SHEET-B (Annexure-II of Section-II)							
Item description	Whether Quoted or not (Yes/No)	Make	Model no	Country of Manufacture	EQUIPMENT & ACCESSORIES CONFIRMS TO ALL TECHNICAL REQUIREMENTS IN TOTALITY (YES/NO)	Catalogue (attached or not)	Remarks
<b>NOTE :-</b>							
1) EQUIPMENT TO BE SUPPLIED ALONG WITH ESSENTIAL ACCESSORIES FOR SUCCESSFUL OPERATION OF EQUIPMENT AT SITE .i.e. CLAMPS, CLIPS,LEADS ,CARRYING CASE etc.							
2) ALL EQUIPMENTS SHALL BE SUPPLIED WITH VALID CALIBRATION CERTIFICATE, WHEREVER APLICABLE.							
3) All equipment shall be properly packed in Galvanized sheet steel trunk/ box with proper lock & key arrangement except for equipment which are trolley mounted or are already available in rugged steel/wooden box packing. Further, any damage (reading error/calibration error/broken parts/missing parts etc) found on receipt at site, leading to replacement of parts/whole item, shall be to bidder's account							
<b>1. Portable AC high voltage test kit, upto 50kV/100 mA : 1 No.</b>							
Make: Megger, Biddle or equivalent							
Voltage Range: 0-50 kV AC							
Current Range: 0-100 mA							
It shall be suitable for testing Generator & associated bus duct							
<b>2.Fully automatic three phase dynamic relay test kit with necessary software for control and data storage: 1 No.</b>							
Make: Doble,Omicron, Megger, Freja or equivalent							
Features-							
(i) The equipment shall be latest model with software full version (required for power plant applications) with license of atleast five years.							
(ii) Fully automatic three phase dynamic relay test kit							
(iii) Software for Control and data storage							
<b>3. Fully automatic Battery impedance measurement test kit : 1 No.</b>							
Make : Megger, Omicron, Mpower or Equivalent							
• capable of measuring and storing specific gravity of acid, temperature of cell etc. with data storage facility							
• Suitable to determine the condition of lead-acid batteries upto 1610 AH and nickel-cadmium batteries up to 760 AH.							

## Annexure-D to Risk & Cost

1. In case of delays (beyond the maximum late delivery period as per LD clause) in supplies, or if there be defective supplies or non-fulfilment of any other terms and conditions of the Contract as enumerated subsequently in this clause, then, without prejudice to its right to recover any expenses, losses or damages to which the Buyer may be put to incur or sustain by reason of the Seller/Contractor's default or breach of Order/Contract or to suspend business dealings with the Seller/Contractor in terms of the Buyers' Guidelines for Suspension of Business Dealings as applicable from time to time, the Buyer shall also be entitled to cancel the Order/Contract either in whole or portion thereof without compensation to Seller. On the occurrence of any of the acts/omissions mentioned below, the Buyer may if it so desires, procure upon such terms and in such manner as deemed appropriate, plant/equipment/ stores not so delivered or others of similar description where plant/ equipment/ stores exactly complying with particulars are not, in the opinion of the Buyer (which shall be final), readily procurable, at the risk and cost of the Seller.

The Seller shall be liable to the Buyer for any excess costs incurred thereof and the Seller shall continue the performance of the Order/Contract to the extent not cancelled under the provisions of this clause. The Seller shall on no account be entitled to any gain on such repurchases. If the Bidder does not agree to this Risk Purchase clause, BHEL reserves the right to reject the bid/offer of the Bidder. The order/contract may be cancelled in whole or part thereof and Risk & Cost Clause in line with terms and conditions of PO/Contract may be invoked by the Buyer in any of the following cases:

- i. If the Seller/Contractor fails to deliver the goods or materials or any instalment thereof within the period(s) fixed for such delivery or the Seller's poor progress of the supply/services vis-à-vis delivery/execution timeline as stipulated in the contract, backlog attributable to the Seller including unexecuted portion of supply does not appear to be executable within balance period available;
- ii. delivers goods or materials not of the contracted quality and failing to adhere to the contract specifications/execution methodology;
- iii. withdrawal from or repudiation/abandonment of the supply/services by the Seller before completion as per contract or if the Seller refuses or is unable to supply goods or materials covered by the order/Contract either in whole or in part or otherwise fails to perform the Order/Contract.
- iv. Non supply by the Seller within scheduled completion/delivery period as per contract or as extended from time to time for reasons attributable to the Seller;
- v. Termination of Contract on account of any other reason(s) attributable to the Seller.
- vi. Assignment, transfer, sub-letting of Contract without BHEL's written permission resulting in termination of Contract or part thereof by BHEL.
- vii. If the Seller be an individual or a Sole Proprietorship, in the event of death or insanity of the Seller.
- viii. If the Seller/Contractor being an individual or if a partnership firm thereof, shall at any time be adjudged insolvent or shall have a receiving order for administration of his estate made against him or shall take any proceeding for composition under any Insolvency Act for the time being in force or make any assignment of the order/Contract or enter into any arrangement or composition with his creditors or suspend payment or if the firm dissolved under the Partnership Act;
- ix. If the Seller/Contractor being a Company is wound up voluntarily or by order of a Court or a Receiver, Liquidator or Manager on behalf of the debenture holders and creditors is appointed or circumstances have arisen which entitles the Court of debenture holder and creditors to appoint a receiver, liquidator or manager
- x. Non- Compliance to any contractual condition or any other default attributable to the Seller.

Such defaulting vendor/Seller shall not be eligible to participate in re-tendering conducted on account of risk purchase made due to fault of such vendor/Seller.

2. BHEL's right to go for Risk and Cost, Calculation of Risk and Cost amount & L D, recovery options to BHEL are given as under: -

2.1 BHEL reserves the right to terminate the contract or withdraw portion of work and get it done through other agency, at the risk and cost of the contractor *after due notice of a period of 14 days' by BHEL* in any of the following cases:

- i) If the Seller/Contractor fails to deliver the goods or materials or any instalment thereof within the period(s) fixed for such delivery or the Seller's poor progress of the supply/ services vis-a-vis delivery/execution timeline as stipulated in the Contract, backlog attributable to seller including unexecuted portion of supply does not appear to be executable within balance available period;
- ii) Delivers goods or materials not of the contracted quality and failing to adhere to the contract specifications;
- iii) Withdrawal from or repudiation/ abandonment of the supply/ services by Seller before completion as per contract or if the Seller refuses or is unable to supply goods or materials covered by the Order/Contract either in whole or in part or otherwise fails to perform the Order/Contract;
- iv) Non-supply by the Seller within scheduled completion/delivery period as per Contract or as extended from time to time, for the reasons attributable to the Seller;
- v) Termination of Contract on account of any other reason (s) attributable to Seller.
- vi) Assignment, transfer, subletting of Contract without BHEL's written permission resulting in termination of Contract or part thereof by BHEL.
- vii) If the Seller be an individual or a sole proprietorship Firm, in the event of the death or insanity of the Seller;
- viii) If the Seller/Contractor being an individual or if a firm on a partnership thereof, shall at any time, be adjudged insolvent or shall have a receiving order for administration of his estate made against him or shall take any proceeding for composition under any Insolvency Act for the time being in force or make any assignment of the Order/Contract or enter into any arrangement or composition with his creditors or suspend payment or if the firm dissolved under the Partnership Act;
- ix) If the Seller/Contractor being a company is wound up voluntarily or by order of a Court or a Receiver, Liquidator or Manager on behalf of the debenture holders and creditors is appointed or circumstances shall have arisen which entitles the Court of debenture holder and creditors to appoint a receiver, liquidator or manager;
- x) Non-compliance to any contractual condition or any other default attributable to Seller.

### 2.1.1 **Risk & Cost Amount against Balance Work:**

Risk & Cost amount against balance work shall be calculated as follows:

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

Where,

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

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

H = Overhead Factor to be taken as 5

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

### **2.1.2 Balance scope of work (in case of termination of contract):**

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

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

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

Substitute/ extra items whose rates have already been approved would form part of contract quantities for this purpose.

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

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

NOTE: In case portion of work is being withdrawn at risk & cost of contractor instead of termination of contract, contract quantities pertaining to portion of work withdrawn shall be considered as 'Balance scope of work' for calculating Risk & Cost amount.

### **2.1.3 LD against delay in executed work in case of Termination of Contract:**

LD against delay in executed work shall be calculated in line NIT terms & conditions, for the delay attributable to contractor. For limiting the maximum value of LD, contract value shall be taken as Executed Value of work till termination of contract.

Method for calculation of LD against delay in executed work in case of termination of contract" is given below:

- i. Let the time period from scheduled date of start of work till termination of contract excluding the period of Hold (if any) not attributable to contractor = T1
- ii. Let the value of executed work till the time of termination of contract = X
- iii. Let the Total Executable Value of work for which inputs/fronts were made available to contractor and were planned for execution till termination of contract = Y
- iv. Delay in executed work attributable to contractor i.e. T2 =  $[1-(X/Y)] \times T1$
- v. LD shall be calculated in line with LD clause (clause 16) of the Contract for the delay attributable to contractor taking "X" as Contract Value and "T2" as period of delay attributable to contractor.

## **2.2 Recoveries arising out of Risk & Cost and LD or any other recoveries due from Contractor:**

Without prejudice to the other means of recovery of such dues from the Seller recoveries from the Seller on whom risk & cost has been invoked shall be made from the following:

- a) Dues available in the form of Bills payable to seller, SD, BGs against the same contract.
- b) Dues payable to seller against other contracts in the same Region/Unit/ Division of BHEL.
- c) Dues payable to seller against other contracts in the different Region/Unit/ division of BHEL.

*In-case recoveries are not possible with any of the above available options, Legal action shall be initiated for recovery against contractor.*

**Annexure for Packing List Guidelines ( To be complied with during execution)**

For faster verification of bills, successful bidder to submit detailed Bill of Material (BOM) at the time of drawings/ documents submission after placement of PO. Each item of the BOM to be uniquely identified with item code no. or item Sl. No.. Supplier to ensure that all items which will find separate mention in the packing list are covered in this detailed BOM.

Supplier to also give the following undertaking in the BOM:

“The BOM provided herewith completes the scope (in content and intent) of material supply under PO No. .... Dated ..... Any additional material which may become necessary for the intended application of the supplied items/package will be supplied free of cost in most reasonable time.

Packing List must indicate:

- a) Packing size
- b) Gross weight and net weight of each package
- c) Contents of the package with cross reference to BOM item code no. / Sl. No.
- d) Quantity of each items separately.

The packing list must cover all the BOM items.

Supplier to give following undertaking in the packing list: The Packing list provided herewith is as per BOM approved under PO No. ----

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**ON COMPANY LETTER HEAD**

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To,

M/s Bharat Heavy Electricals Ltd.,  
Project Engineering Management,  
Power Project Engineering Institute,  
HRD & ESI Complex, Plot No 25, Sector-16 A,  
Noida-201301

**Project:** 3 x 660 MW NORTH KARANPURA

**Package:** ELECTRICAL LABORATORY EQUIPMENT

**Reference:** Tender Enquiry No: \_\_\_\_\_ Dated: \_\_\_\_\_

We have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries as per the guidelines dated 23.07.2020 issued by Department of Expenditure (DoE), Ministry of Finance;

We hereby certify that we are not from such a country and we are eligible to be considered.

We further certify that we will not sub-contract any work to a contractor from such countries unless such contractor is registered with the Competent Authority.

We hereby certify that we shall fulfil all requirements in this regard

**Name of Bidding Company/Firm:**

**Name of Authorised Signatory:**

**Designation of Authorised Signatory:**

**Official Seal of the Bidding Company/Firm:**

**Notes:**

1. Please note that **Owner/ Partner/ CMD/ Director/ Authorized Signatory with proof that he/she is authorized to sign on owner's behalf**
2. Wherever applicable, evidence of valid registration by the competent authority shall be attached.

**Letter head of Company**

Ref \_\_\_\_\_

Date \_\_\_\_\_

To,

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

**Subject: -Certification regarding local content**

Reference: Tender Enquiry No-\_\_\_\_\_

Name of Package: ELECTRICAL LABORATORY EQUIPMENT

Dear Sir,

We hereby certify that items offered by us of Control Valves for 3 x 660 MW NORTH KARANPURA meets the requirement of minimum local content in line with ATC Cl. No. 25 of NIT No \_\_\_\_\_ date \_\_\_\_\_ and the Public Procurement (Preference to Make in India), Order 2017 dated-15.06.2017, 28.05.2018, 29.05.2019 , 04.06.2020 & 16.09.2020.

Local Content: \_\_\_\_\_%

We further confirms that details of location at which the local value addition is made will be our registered works at \_\_\_\_\_ (address of the works)

Yours very truly

\_\_\_\_\_ (authorized signatory of company)

\_\_\_\_\_ (firm name)