



ENQUIRY NO. 958E123 dated 02.07.2018
BHEL/TBG/ATS/01

ACTIVITY SCHEDULE

(To be filled – up by the supplier)

Sl. No.	ACTIVITY	Activity time in weeks	Cumulative time in Weeks (from LOI/PO date)	Remarks, If any
1	Receipt of P.O			
2	Submission of P.O Acceptance			
3	Submission of documents necessary for getting manufacturing clearance like Drawings, data sheet etc.			
4	Review and Approval of documents and issue of manufacturing clearance			
5	Manufacturing Time			
6	Inspection and Issue of MICC	By BHEL		
7	Issue of other documents like Road Permits etc.	By BHEL		
8	Dispatch			
9	Transit time upto Site.			

Note: 1) Supplier must ensure the completeness and correctness of the requisite documents before submission for approval. Delay in approval on account of incomplete/inadequate information shall be the responsibility of supplier.

2) Inspection call should be given in the prescribed format only. Inspection calls not in the prescribed format shall not be entertained.

3) Qty. to be offered for Inspection should be in accordance within Delivery-schedule - lot. BHEL reserves the right not to entertain multiple inspection calls for a Delivery- lot and delay on this account shall be the responsibility of Supplier.

Name of Tenderer

SCHEDULE OF COMMERCIAL DEVIATION

Enquiry. No. 958E123 dated 02.07.2018

The following are the deviations/ variations exception from the General Terms and Conditions:

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

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

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

Note : 1. Continuation Sheets of like size and format may be used as per the Bidder's Requirement and shall be annexed to this schedule.

2 Deviation mentioned in this schedule shall only be considered.

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

Reproduction of the same in any sort is not acceptable.

Place:
Date :

Signature of the authorised representative of

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

SCHEDULE OF TECHNICAL DEVIATION

Enquiry. No. 958E123 dated 02.07.2018

The following are the deviations/ variations exception from the Technical Specifications:

SL.NO.	CLAUSE NO. OF GENERAL TERMS AND CONDITIONS	STATEMENT OF DEVIATION
1		

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

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

Note : 1. Continuation Sheets of like size and format may be used as per the Bidder's Requirement and shall be annexed to this schedule.

2 Deviation mentioned in this schedule shall only be considered.

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

Reproduction of the same in any sort is not acceptable.

Place:

Date :

Signature of the authorised representative of

Bidder's name :.....

Designation:.....

1. For any technical clarification, please contact Mr. Saroj Kumar, Sr. Manager (TBEM); Contact No. 0120-6748527; e-mail: sarojkumar@bhel.in
2. For any commercial clarification, please contact Mr. Sunny Dhall, Sr. Engineer (TBMM); Contact No. 0120-6748478 e-mail: sunnydhall@bhel.in
3. Proposed delivery plan is 30 July 2018. However, vendor has to quote their best possible delivery plan in activity schedule to meet the tender's delivery requirement. In case, BHEL's delivery requirement is not met by vendor(s), then a chance may be given to all such vendors to review their quoted delivery schedule in line with BHEL's delivery requirement. However, if vendor fails to meet the requisite delivery plan, then BHEL reserves the right not to consider the offer of such vendor(s).

NOTE:

1. Vendor to clearly certify in the unpriced and priced bid that they have quoted as per the specified price format mentioned in the tender, otherwise their offer shall be liable for rejection.
2. Item-wise evaluation shall be done for supply (Supply and Service of each item is to be considered separately)
3. In line with above mentioned Sl. No. 2 it shall be the responsibility of the bidder to quote for each of the items separately. There shall be a separate sealed envelope for prices of one item and the cover of this sealed envelope must clearly mention the quoted item. It is the bidders responsibility to ensure that a single sealed envelope (as described above) must contain the price of one item only. In case more than one item's prices are mentioned in one envelope then BHEL shall reserve the right to reject the offer.
4. In order to bid for more than one item the bidders must provide independently sealed envelope with the corresponding price. All sealed envelopes of item wise price bids should then be placed in another sealed envelope which shall bear the Tender details for clear identification
5. Bidder should provide "Authorized Distributor Certificate" from Original Manufacturer/OEM of the offered test equipment. Authorized Distributor Certificate not issued by Original manufacturer/OEM of the offered test equipment is not acceptable.

ALL OTHER TERMS AND CONDITIONS SHALL BE AS PER THE BHEL's STANDARD NIT.

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

GENERAL TERMS AND CONDITIONS FOR TENDER ENQUIRY / CONTRACT

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

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1.	INSTRUCTION TO BIDDERS : 1.1 Sealed bids are invited for the items mentioned in the tender enquiry conforming to the NIT including Technical Specifications. Bids should be typed and free from overwriting and erasures. Corrections or additions / deletions, if any, must be clearly written and attested, otherwise offer may be rejected. 1.2 Bidder must ensure that their bid is submitted / dropped in the tender box on or before 14-00 Hrs. IST on the due date of opening, unless otherwise specified in the NIT, at the address as follows :- Tender Box, Materials Management, Transmission Business Group, Bharat Heavy Electricals Limited, 5th Floor, Tower-A, Advant Navis IT Business Park, Plot-7, Sector-142, Noida Expressway, Noida, Dist. G. B. Nagar, U. P. – 201305 1.3 In case tender enquiry is floated through the e-procurement system, offer / bid has to be submitted through the e-procurement system ONLY as per instructions given in the e-procurement portal (https://bheleps.buyjunction.in). 1.4 The bids shall be opened at 14-30 Hrs. IST on the due date of opening, in the presence of participating bidders who may like to be present, unless otherwise specified in the NIT. Bids received late are liable for rejection. Bidders sending bids by courier or post will have to ensure that it is timely delivered at the above address. 1.5 Bids are to be submitted duly signed with seal in two parts :- a) Techno-commercial Bid (Part-I) – To be submitted in 2 sets (original + copy). A copy of Price Bid (Part-II) clearly mentioning all the necessary information as per format without prices "Un-Priced Bid" is also to be enclosed in Part-I Bid. b) Price Bid (Part-II) – To be submitted only in one set in a separate sealed envelope. This should not contain any Technical and / or Commercial Terms and Conditions. The rates should be quoted both in figures and words. 1.6 The Part-I and Part-II Bids are to be sealed in separate envelopes and marked as "Techno-commercial Bid (Part-I)" and "Price Bid (Part-II)" respectively. Both

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	the envelopes are to be kept in another common envelope and marked as "BID". Each envelope should be sealed and superscribed with tender enquiry no., item / package name, project name and due date of opening. Bidder's name and address shall also be mentioned on each envelope. 1.7 For any technical clarification, please contact official mentioned in the tender enquiry / NIT. 1.8 For any commercial clarification please contact official issuing tender enquiry / NIT. 1.9 Price bid (Part-II) should not contain any additional information / description other than given in "Un-Priced Bid" submitted with "Techno-commercial Bid (Part-I)" except prices, otherwise bid is liable for rejection. 1.10 Price Bid submitted along with the bid shall remain valid up to validity of offer. Any discount / revised offer submitted by the bidder on its own shall be accepted provided it is received before the due date and time of offer submission (i.e. Part-I Bid). The discount shall be applied on pro-rata basis to all items including optional items, if any, unless specified otherwise by the bidder. Discount offered shall be valid for full duration of validity of the offer including extension of validity, if any. Unsolicited Supplementary / Revised Price Bid submitted after the due date and time of offer submission (i.e. Part-I Bid), during validity period of offer, unless asked by BHEL, shall not be considered. Withdrawal of quotation by the bidder, at any stage after its opening, may entail suitable action against such bidder by BHEL. 1.11 The consultants / firm (and any of its affiliates) shall not be eligible to participate against tender enquiry for the related goods or works or services for the same project, if they were engaged by BHEL-TBG for the consultancy services. 1.12 In case any Foreign OEM / Foreign Principal insists on engaging the services of an agent, such agent shall not be allowed to represent more than one manufacturer / supplier in the same tender. Moreover, either the agent could bid on behalf of the manufacturer / supplier or the manufacturer / supplier could bid directly but not both. In case bids are received from the manufacturer / supplier and the agent, bid received from the agent shall be ignored. 1.13 Non-conformities / errors / discrepancies in quoted prices in price bids shall be dealt as follows :- - If, in the price structure quoted for the required goods / services / works, there is discrepancy between the unit price and the total price (which is obtained by multiplying the unit price by the quantity), the unit price shall prevail and the total price corrected accordingly, unless in the opinion of BHEL there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price corrected accordingly. - If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected. - If there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail

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	subject to (a) and (b) above. d) If there is such discrepancy in an offer as mentioned in (a), (b) & (c) above, the same shall be conveyed to the bidder with target date upto which the bidder has to send his acceptance on the above lines and if the bidder does not agree to the decision of the BHEL, the bid is liable to be ignored. 1.14 In case the scope of the successful bidder / supplier against this tender enquiry includes Erection, Testing and Commissioning (ETC) of the equipment / material at site in addition to Supply, Purchase Order shall be placed for Supply Portion and Contract shall be separately awarded for ETC at Site Portion. General Terms and Conditions for Tender Enquiry / Contract mentioned herein shall be applicable for both Supply & ETC at Site. Additional Terms and Conditions for Tender Enquiry / Contract for Erection, Testing and Commissioning at Site "BHEL/TBG/GTC-ETC/2016" shall be applicable for ETC at Site only which is to be read in conjunction with General Terms and Conditions for Tender Enquiry / Contract mentioned herein. However, any breach of either the Purchase Order or the Contract shall be deemed to be breach of the other. 1.15 Taxes and Duties payable extra as per Clause No. 2.3 in NIT, if not specified/quoted clearly as extra shall be considered as included in Ex-works Price and therefore shall not be reimbursed. Taxes and duties not payable extra as per NIT shall be deemed to be included in Ex-works Price. 1.16 If the rates for taxes and duties in respect of the quoted materials and / or services assumed by the Supplier are less than the tariff prevailing at the time of tendering, Supplier will be responsible for such under quotations. However if the rates assumed are higher than the correct rates prevailing at the time tendering, the difference will be to the credit of BHEL. Note : Representative / official deputed by the bidder to witness tender opening must produce authorization letter for the same.
2.	PRICES : 2.1 Unless specifically indicated in the NIT, all prices shall be FIRM. No enhancement of rate for whatsoever reasons unless and until asked by BHEL shall be allowed. 2.2 Unless specifically indicated in the NIT, the prices shall be on INR basis 2.3 Unless specifically indicated in the NIT, the prices are to be quoted on FOR (Site / Destination) basis excluding GST. The break-up of prices shall be as under :- a) Ex-works Price: Ex-works price including packing & forwarding charges. b) Freight: Freight for door delivery up to destination / site / store are to be quoted separately. c) Insurance: Insurance for door delivery up to destination / site / store are to be quoted separately. d) Type Test Charges: If asked in the technical specification, it is to be quoted separately for each test.

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	e) Charges for Supervision of Erection, Testing & Commissioning (ETC) at Site: To be quoted separately if specified in NIT/Price Schedule. f) Charges for Testing & Commissioning at Site: To be quoted separately if specified in NIT/Price Schedule. g) Charges for Erection, Testing & Commissioning at Site: To be quoted separately if specified in NIT/Price Schedule. h) Training Charges: To be quoted separately if specified in NIT/Price Schedule. 2.4 GST rates along with HSN/SAC code as applicable on Sr No (a) to (h) above is to be mentioned separately in percentage in both un-priced bid and price bid. Note : i) Unless otherwise specified in the NIT, the purchase order shall be placed on Ex-works basis for Indian bidders. ii) Prices quoted by Indian bidders shall be in Indian Rupees only. iii) In case Supervision of Erection, Testing & Commissioning (ETC) at Site or Testing & Commissioning at Site or Erection, Testing & Commissioning at Site is also in scope of the bidder along with supply, bidder has to ensure that prices quoted for such services also are in line with special terms & conditions of the NIT, if any. iv) Unless otherwise specified in the NIT, Unloading at Site / Destination shall not be in the scope of the supplier. v) Prices in respect of Sr. No. (a) to Sr. No. (h) of Clause 2.3 above are to be quoted inclusive of all taxes & Duties, charges. Levies, royalty etc. if any, excluding GST.
3.	TERMS OF PAYMENT: 3.1 For Supply only in scope of the supplier: 100% of payment within 60 days from the date of receipt of complete invoice along with documents in 3 sets (original + 2 copies) as follows: - LR / GR duly endorsed by BHEL Site Official. - Material Receipt Certificate issued by BHEL Site Official. - GST Compliant Tax Invoice - Packing List (Case-wise) - Copy of Transit Insurance Certificate from underwriters. - Material Inspection Clearance Certificate (MICC) issued by BHEL Quality Management - Guarantee Certificate - Copy of Performance Bank Guarantee (PBG) - Certificate of acceptance of Type Test Reports issued by BHEL Engineering Management wherever specifically mentioned in the Purchase Order.

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	3.2 For Supply where Supervision of Erection, Testing & Commissioning (ETC) at Site is in scope of the supplier or Supply where Testing & Commissioning at Site is in scope of the supplier: a) 95% of payment within 60 days from the date of receipt of complete invoice along with documents in 3 sets (original + 2 copies) as follows: • LR / GR duly endorsed by BHEL Site Official. • Material Receipt Certificate issued by BHEL Site Official. • GST Compliant Tax Invoice • Packing List (Case-wise) • Copy of Transit Insurance Certificate from underwriters. • Material Inspection Clearance Certificate (MICC) issued by BHEL Quality Management • Guarantee Certificate • Copy of Performance Bank Guarantee (PBG) • Certificate of acceptance of Type Test Reports issued by BHEL Engineering Management wherever specifically mentioned in the Purchase Order. b) 5% of payment within 60 days from the date of receipt of complete invoice along with documents in 3 sets (original + 2 copies) as follows: • Certificate of successful completion of Supervision of Erection, Testing & Commissioning at Site if it is in the scope of the supplier or Certificate of successful completion of Testing & Commissioning at Site if it is in the scope of the supplier. • Certificate of completion of final documentation as per Purchase Order / Technical Specification issued by BHEL Engineering Management. 3.3 For Supply where Erection, Testing & Commissioning (ETC) at Site is in scope of the supplier: a) 90% of payment within 60 days from the date of receipt of complete invoice along with documents in 3 sets (original + 2 copies) as follows: • LR / GR duly endorsed by BHEL Site Official. • Material Receipt Certificate issued by BHEL Site Official. • GST Compliant Tax Invoice • Packing List (Case-wise) • Copy of Transit Insurance Certificate from underwriters. • Material Inspection Clearance Certificate (MICC) issued by BHEL Quality Management • Guarantee Certificate • Copy of Performance Bank Guarantee (PBG) • Certificate of acceptance of Type Test Reports issued by BHEL Engineering Management wherever specifically mentioned in the Purchase Order b) 10% of payment within 60 days from the date of receipt of complete invoice along with documents in 3 sets (original + 2 copies) as follows: • Certificate of successful completion of Erection, Testing & Commissioning at Site issued by BHEL Site Official / Construction Management.

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	• Certificate of completion of final documentation as per Purchase Order / Technical Specification issued by BHEL Engineering Management. 3.4 For Type Test Charges: 100% payment along with applicable GST within 60 days from the date of receipt of complete GST compliant Tax invoice along with copy of Certificate of acceptance of Type Test Reports issued by BHEL Engineering Management in 3 sets (original + 2 copies) on completion of delivery (at site, if F&I is in scope of supplier) of main supplies (excluding spares) for which Type Tests are applicable. List of main supplies (excluding spares) for which Type Tests are applicable shall be certified by BHEL Engineering Management. 3.5 For Charges for Supervision of Erection, Testing & Commissioning at Site: 100% payment along with applicable GST within 60 days from the date of receipt of complete GST compliant Tax invoice along with certificate of successful completion of Supervision of Erection, Testing & Commissioning at Site issued by BHEL Site Official / Construction Management in 3 sets (Original + 2 copies). 3.6 For Charges for Testing & Commissioning at Site: 100% payment along with applicable GST within 60 days from the date of receipt of complete GST compliant Tax invoice along with certificate of successful completion of Testing & Commissioning at Site issued by BHEL Site Official / Construction Management in 3 sets (Original + 2 copies). 3.7 For Training Charges 100% payment along with applicable GST within 60 days from the date of receipt of complete GST compliant Tax invoice along with certificate of completion of training issued by BHEL Engineering Management in 3 sets (original + 2 copies). Note : i) Supplier has to submit invoice(s) as per PO or approved billing break-up of prices (if applicable as per NIT). ii) In case of supplies for overseas project, Material Receipt Certificate issued by BHEL Authorized Representative shall also be acceptable. iii) In case of Transit Insurance under Open Insurance Policy, Intimation / Declaration of Transit Insurance as per terms of the relevant Open Insurance Policy along with copy of Open Insurance Policy from underwriters shall also be acceptable. iv) Supplier has to ensure commencement of transit insurance from the date not later than LR / GR date. v) Supplier has to submit Tax Invoice(s). Supplier should ensure that Tax Invoice should comply all statutory requirements under GST Law to enable BHEL to avail input credit

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	vi) MSMED Act, 2006 and the rules made thereunder as amended from time to time shall be applicable for release of payment to suppliers qualified & registered as Micro & Small Enterprises based on documents mentioned in the NIT for MSME. vii) Supplier has to submit PBG (as per BHEL format) & Guarantee Certificate as per PO terms. viii) In case any shortages and / or damages in supplies, an amount calculated based on comments against Material Receipt Certificate issued by the BHEL Site Official shall be withheld from the supply payment against 3.1(a) or 3.2(a) above to be deemed fit by BHEL subject to a minimum of 10% of the total ex-works value of the invoice corresponding to the LR / GR against which any shortages and / or damages are reported. The withheld amount shall be released after the shortages and / or damages in supplies are supplied / replenished against Certification by BHEL Site Official. ix) Payment of GST component shall be made only if vendor has deposited the Tax and credit for the same is reflected in GSTN (GST Network). In case credit of the same is not reflected in GSTN, vendor may alternatively furnish BG of GST Amount for a period valid for not less than 1 month. In case of disallowance of credit / non reflection of credit in GSTN, amount will be recovered from supplier along with applicable Interest, penalty etc. from any of his dues. x) If GST is payable by BHEL on reverse Charge Mechanism basis, vendor should ensure the submission of GST compliant Tax invoice immediately on dispatch/ performing the service. In case of non-compliance, any additional charges towards interest, penalty etc. will be to vendor's account. xi) TDS under GST Act, if applicable, shall be deducted unless Exemption Certificate, if applicable, from the appropriate authority is furnished to BHEL along with Invoice.
4.	INTEREST LIABILITY : In case of any delay in payment due to any reason, BHEL shall not pay any interest on delayed payment. Also, no interest shall be payable by BHEL on the bank guarantee / deposit amount or balance payment or any other money which may become due owing to difference or misunderstanding or any dispute before any quasi judicial authority between BHEL and the Supplier / Contractor.
5.	GUARANTEE : The equipment / material supplied and services rendered (if applicable) shall be guaranteed to be free from all defects and faults in design & engineering, material, workmanship & manufacture and in full conformity with the Purchase Order / Contract, Technical Specifications & approved drawings / data sheets, if any, for 18 months from the date of last delivery or 12 months from the date of commissioning, whichever is earlier. Wherever Erection, Testing & Commissioning at Site are also in the scope of the Supplier, the guarantee period shall be 18 months from the date of last delivery or 12 months from the date of commissioning, whichever is later. The defective equipment / material / component shall be replaced free of cost at site. Freight & Insurance during transit shall also be in the scope of the supplier / contractor. Any expenditure for dismantling and re-erection of the replaced equipment / material / component shall be to supplier's / contractor's account. All replacements during the guarantee period shall be delivered at site promptly and satisfactorily within a period not more than 45 days from the date of reporting the defect / rejection etc.

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	In the event of the supplier / contractor failing to replace the defective equipment / material / component within the time period mentioned above, BHEL may proceed to undertake the replacement of such defective equipment / material / component at the risk and cost of the supplier / contractor without prejudice to any other rights under the contract and recover the same from PBG / other dues of this Purchase Order / Contract or any other Purchase Order / Contract executed by the supplier / contractor. Note : i) In case of Illumination System, items viz. Lamps, Tubes, Ballast, Starters, Capacitors & Fuses will not be under Guarantee after commissioning. ii) In addition to the above guarantee period, Extended Guarantee / Warranty, if any, shall be as per NIT / Technical Specifications. iii) In case offer of agent of Foreign OEM / Foreign Principal is considered, as per Clause No. 1.12 above, Guarantee as mentioned above has to be provided by the Foreign OEM / Foreign Principal also.
6.	LATENT DEFECT : Liability for latent defects shall be for defects inherently lying within material or arising out of design deficiency which does not manifest itself during guarantee period but later and shall be limited to five years from the expiry of the guarantee period.
7.	PERFORMANCE BANK GUARANTEE (PBG) : Supplier shall arrange to submit Performance BG / Deposit on a non-judicial stamp paper of appropriate value along with first invoice or within 60 days from placement of Purchase Order (PO) whichever is earlier, in line with one of the applicable options as follows :- Option "A" A single rolling PBG for Rs. 50 Lakhs initially valid for 18 months with claim period of 3 months extra over and above 18 months for all the Purchase Orders being executed for Transmission Business Group, BHEL. However, validity of the PBG shall be extended till 18 months from the date of last delivery with 3 months claim period extra over and above 18 months. Single Rolling PBG option shall not be applicable in case Ex-works value of the PO at the time of placement of PO exceeds Rs. One Crore. Option "B" PBG for 10% of the total Ex-works PO value, valid for 18 months from the date of last delivery with claim period of 3 months extra over and above 18 months. Ex-works PO value at the time of placement of PO shall be considered for calculation of the PBG amount. Option "C" In case the total Ex-works PO value at the time of placement of PO does not exceed Rs. Ten Lakhs, interest free Deposit of 10% of the total Ex-works PO value at the time of placement of PO in form of Demand Draft favouring "Bharat Heavy Electricals Limited" and payable at New Delhi / Delhi / Noida shall also be acceptable to BHEL in lieu of PBG, which shall be released after expiry of 21 months from the date of last delivery after deduction, if any, within 60 days from receipt of invoice in 3 sets (original + 2 copies) to be submitted by the supplier. Note :

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	i) The Bank Guarantee shall be from any bank as per Annexure for List of Banks (32 Nos.). The original PBG should be sent by issuing Bank directly to AGM (Finance), TBG, BHEL, Noida. ii) Extension of validity of the PBG in original, as per above clause, should be sent by issuing Bank directly to AGM (Finance), TBG, BHEL, Noida at least 45 days before expiry of validity of the PBG. iii) Unless otherwise specified in the NIT, deviation taken for non-submission of PBG / Deposit, as applicable, shall not be accepted. iv) Supplier has to confirm one of the applicable options for submission of PBG / Deposit before placement of PO. v) In case of non-submission PBG / Deposit, as applicable, BHEL reserve the right for Risk Purchase as per terms of the NIT and impose Suspension of Business Dealings with the Supplier / Contractor. vi) BHEL reserve the right to encash the Bank Guarantee and forfeit the amount in the event of any default, failure or neglect on part of the Supplier in fulfilment of performance of the Purchase Order. vii) Value of Bank Guarantee (at the time of submission) shall remain unchanged for any subsequent variations in Purchase Order value upto $\pm 20\%$. Beyond this variation of $\pm 20\%$, the supplier shall arrange to enhance or may reduce the value of the Bank Guarantee accordingly for the total variation promptly. viii) Vendor to ensure submission of Certificate of Final Documentation / Confirmation regarding Non applicability of Final Documentation, as the case may be, as referred in clause No 9 regarding Final Documentation. BG shall be released only after submission of the same to BHEL TBMM.
8.	SUBMISSION OF DRAWINGS / DOCUMENTS FOR APPROVAL : Supplier shall submit the master document list within 7 days from date of Purchase Order / Contract, unless otherwise specified in the NIT, with planned dates for submission which shall be in line with activity schedule as per Purchase Order / Contract and shall be finalized with BHEL Engineering Management. Date of first submission of drawings / documents shall be certified by BHEL Engineering Management after the receipt of applicable drawings / documents (e.g. project specific cover sheet, GTP, OGA drawings, schemes, type test reports etc.) by BHEL. During detailed engineering stage, necessary hard copies of the engineering drawings / documents shall also be submitted by the supplier as per the Purchase Order / Contract requirement. The supplier shall also submit the packing drawings as per technical specifications. In case item(s) offered require any interface details of other item (not in the scope of supplier & required for operating the equipment), the supplier has to submit interfaces schedule along with submission of engineering drawings / documents. It shall be responsibility of the supplier to get the details of the interfaced item from BHEL before manufacturing to avoid any mismatch at site.
9.	FINAL DOCUMENTATION : Final documentation as called in the Technical /contract specification is to be submitted within 3 months from the date of first delivery of respective equipment, item/material. After submission of Final Documentation, BHEL Engineering Management (TBEM) will issue a Certificate of Completion of Final Documentation. Wherever Final Documentation is not applicable, BHEL Engineering Management (TBEM) will issue confirmation regarding the same, Vendor to submit the Certificate of Final Documentation / Confirmation regarding Non applicability of Final Documentation, as the case may be+D131, to BHEL TBMM. In case of Non Submission of Certificate of Final Documentation / Confirmation regarding Non applicability of Final Documentation, BG will be liable for encashment.
10.	INSPECTION : BHEL / customer / third party shall inspect equipment / material before despatch. Stage inspection during manufacturing may also be carried out. Material to be

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	despatched only after getting Material Despatch Clearance Certificate (MDCC) / MICC issued by BHEL. Supplier shall send inspection call on prescribed format / web site only, with an advance notice of 15 days. Supplier to ensure submission of all routine / acceptance test reports, inspection reports and all other documents related to inspection, immediately to BHEL. BHEL representative is authorised to carry out audits along with Third Party Inspection Agency at vendor's / supplier's works before clearing the items for despatch.
11.	DESPATCH DOCUMENTS : Despatch documents to be immediately sent to BHEL on despatch are as follows :- • Copy of Invoice • Copy of LR / GR in case of Indian suppliers or BL / AWB in case of foreign suppliers • Copy of Packing List (Case-wise) • Copy of Transit Insurance Certificate from underwriters • Copy of Guarantee Certificate
12.	DELIVERY PERIOD : Delivery / Completion requirement shall be mentioned in the NIT. Bidder to specify best delivery / completion period possible in weeks from the date of LOI / PO as per activity schedule for consideration by BHEL. Time required for type test, if applicable, is to be separately indicated. Note : LR / GR date or invoice date (whichever is later) for indigenous supplies and BL / AWB date for FOB / CIF (if applicable) contracts shall be considered as delivery date.
13.	LIQUIDATED DAMAGES FOR DELAYED DELIVERY In case of delay in execution of Purchase Order beyond the contractual delivery time, an amount of 0.5% of the total Purchase Order value for supply (incl. taxes and duties, freight & insurance as applicable) per week of delay or part thereof subject to a maximum of 10% of the total Purchase Order value for supply (incl. taxes and duties, freight & insurance as applicable) shall be deducted as Liquidated Damages (LD) along with applicable GST (if any) on LD. However, in case of staggered (lot-wise) contractual delivery schedule, an amount of 0.5% of the total Purchase Order value for supply (incl. taxes, duties, freight & insurance as applicable) of delayed lot per week of delay or part thereof subject to maximum of 10% of the total Purchase Order value (Incl. taxes, duties, Freight & Insurance as applicable) shall be deducted as Liquidated Damages (LD) along with applicable GST(if any) on LD Note : i) In case of any amendment / revision in PO / WO, the LD shall be linked to the amended / revised Purchase Order / Contract value and delivery / completion time / schedule, if applicable. ii) LR / GR date or invoice date (whichever is later) for indigenous supplies and BL / AWB date for FOB / CIF (if applicable) for imported supplies shall be treated as the date of dispatch for levying LD as above. iii) However, for indigenous supply, if time period between date of receipt of material at site / destination by Site Official & the date of LR / GR or invoice (whichever is later) is more than 30 days, where distance from place of despatch

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	as per LR / GR is upto 1000 Kms or if time period between date of receipt of material at site / destination by Site Official & the date of LR / GR or invoice (whichever is later) is more than 45 days, where distance from place of despatch as per LR / GR is more than 1000 Kms, such excess period shall also be considered for LD purpose. iv) If, as per supplier, delay is not attributable to the supplier, delay analysis with documentary evidence may be submitted by the supplier at the earliest but not later than six months from the end of the financial year in which the payment is withheld. Based on the above details / documents submitted by the supplier, BHEL shall take final decision and if considered appropriate by BHEL, withheld amount (full or part as the case may be) shall be released, otherwise, full or balance withheld amount shall be treated as deduction of Liquidated Damages (LD) towards delayed delivery.
14.	VALIDITY OF OFFER : The offer shall be valid for 120 days from the due date of opening of tender (i.e. techno-commercial bid unless otherwise specified in the NIT). Prices of Spares, wherever they optional items, shall be valid till two years from the date of placement of PO.
15.	ACCEPTANCE / REJECTION OF TENDER : BHEL reserve the right to reject in full or part, any or all tender without assigning any reason thereof. BHEL also reserve right to vary the quantities as mentioned in the NIT. Acceptance of offer is subject to vendor approval by customer before opening of price bid. BHEL shall not be bound by any power of attorney granted by tenderer or by changes in composition of the firm made subsequent to award of order / contract. BHEL may however recognize such power of attorney and changes after obtaining proper legal advice, cost of which will be chargeable to the seller / contractor concerned. If the tenderer deliberately gives wrong information, BHEL reserves the right to reject such an offer at any stage or cancel the order / contract, if awarded, and forfeit the security deposit and bank guarantee.
16.	DEVIATION : The bids having deviation(s) w.r.t. tender are liable for rejection. However, BHEL, at its discretion, may load the prices for evaluation of offer with prior intimation to bidder.
17.	TENDER EVALUATION : Comparative statement shall be prepared and evaluated on total cost basis at destination/site (as per terms of NIT) considering overall quantity indicated in NIT unless contrary to same is specifically mentioned in the tender enquiry / NIT. Total cost for this purpose shall include cost of scope of work as mentioned in NIT along with applicable taxes & duties, and other services etc. (if applicable). GST input credit available to BHEL shall be reduced from prices while determining L1 status. In case all bidders are foreign & Port of Import (destination port) is same for all the bidders, evaluation of offers shall be done on CIF (Port of Import) basis. Otherwise, evaluation of offers shall be done on the basis of delivered cost at site / destination to BHEL. Further, in case of foreign bidders, marine freight & insurance are to be quoted separately & the purchase order may be placed on FOB basis with an option for delivery on CIF / CFR basis, if required, later. In case of foreign bidders, Exchange Rate (TT selling rate of State Bank of India) as on date of tender opening (Part-I Bid in case of two part bid) shall be considered. If the relevant day happens to be a bank holiday, then the forex rate as on the previous bank (SBI) working day shall be taken for tender evaluation.
18.	LOADING CRITERIA : List of permissible deviations & loading criteria thereof are as follows :-

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	a) Payment Terms Base rate of SBI (as applicable on the date of bid opening / techno-commercial bid opening in case of two part bids) + 6% shall be considered for loading for the period of relaxation sought by bidder(s) against terms of payment in the NIT. b) Liquidated Damages (LD) for Delayed Delivery Loading on LD clause shall be to the extent to which it is not agreed to by the bidder (at offered value). c) In case of foreign bidders, if the quoted prices is on CIF basis only, it shall be loaded to arrive at total FOR (Site / Destination) price, as applicable, by factors as follows :- i) Port handling / clearing charges: @ 1% of CIF value to arrive at Customs Assessable Value. ii) Custom Duty (including CVD & SAD) as per NIT prevailing on date of price bid opening. iii) Inland Freight & Transit Insurance: @ 5% of CIF value where distance between site / destination and Port of Discharge is upto 1000 Kms or @ 7% of CIF value where distance between site / destination and Port of Discharge is more than 1000 Kms. Note : Additional deviations (if considered acceptable by BHEL) & the loading criteria shall be communicated to all the qualified bidders before price bid opening.
19.	ARBITRATION : In the event of any dispute emanating from and relating to this contract, the matter shall be referred to the sole arbitration of the person appointed by the competent authority of BHEL. Subject to aforesaid, the provisions of "The Arbitration and Conciliation Act, 1996" and the rules made thereunder as amended from time to time in India shall apply to the arbitration proceedings. The venue of arbitration shall be in New Delhi. Further there shall be no claim for any pre-reference or pendente-lite interest on the claims and any claim for such interest made shall be void. However, in case of contract with Public Sector Enterprise / Undertaking (PSE/PSU) or Govt. Dept., the extant guidelines of Govt. of India shall be followed.
20.	LEGAL SETTLEMENT : Indian Courts at New Delhi / Delhi shall have exclusive jurisdiction to decide the dispute, if any, arising out of or in respect of the contract(s) to which these conditions are applicable. Contract, including all matters connected with contract, shall be governed by the Indian Law, both substantive and procedural, for the time being in force including modification thereto.
21.	SUB-CONTRACTING : In case further subcontracting of BHEL Purchase Order / Contract or part thereof is envisaged by supplier, the same can be done after written permission is obtained from BHEL. However it shall not absolve the Supplier / Contractor of the responsibility of fulfilling BHEL Purchase Order / Contract requirements. In case of subcontracting of Purchase Order / Contract awarded by BHEL or part thereof without such permission, BHEL reserve the right to cancel the Purchase Order / Contract and source such material / component / equipment / system from any other agency at the risk and cost of the Supplier / Contractor. If Supplier / Contractor is an individual or proprietary concern and the individual or the proprietor dies or the partnership is dissolved or substantially affected, then unless BHEL is satisfied that legal representative of individual Supplier / Contractor or proprietor of proprietary concern and surviving partners of partnership firm are capable of carrying out and completing the Purchase Order / Contract, BHEL shall

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	be entitled to cancel the Purchase Order / Contract as to its incomplete portion and without being in any way liable to payment of any compensation to legal representative of Supplier / Contractor and / or to surviving partners of Supplier's / Contractor's firm on account of cancellation of the Purchase Order / Contract. Decision of BHEL that legal representatives of deceased Supplier / Contractor or surviving partners of the Supplier's / Contractor's firm cannot carry out and complete the Purchase Order / Contract shall be final and binding on the parties hereto. Terms and Conditions shall not get affected in case of de-merger / amalgamation / taking-over / re-constitution etc.
22.	RISK PURCHASE : In case the Supplier / Contractor fails to supply or fails to comply with terms & conditions of the Purchase Order / Contract or delivers equipment / material not of the contracted quality or fails to adhere to the contract specifications or fails to perform as per the activity schedule and there are sufficient reasons even before expiry of the delivery / completion period to justify that supplies shall be inordinately delayed beyond contractual delivery / completion period, BHEL reserve the right to cancel the Purchase Order / Contract either in whole or in part thereof without compensation to Supplier / Contractor and if BHEL so desires, may procure such equipment / material / items not delivered or others of similar description where equipment / material / items exactly complying with particulars are not readily procurable in the opinion of BHEL which is final and in such manner as deemed appropriate, at the risk and cost of the Supplier / Contractor and the Supplier / Contractor shall be liable to BHEL for any excess cost to BHEL. However, the Supplier / Contractor shall continue execution of the Purchase Order / Contract to the extent not cancelled under the provisions of this clause. Recovery amount on account of purchases made by BHEL at the risk and cost of Supplier / Contractor shall be the difference of total value of new Purchase Order (PO) value and total value of old Purchase Order for applicable items, where the total value of new PO is more than total value of old PO for applicable items, plus additional 15% of the total ex-works value of new PO as overheads. The Supplier / Contractor shall on no account be entitled to any gain on such risk & cost purchase. In case the purchase order (PO) value of the new PO is less than the PO value of the old PO, 15% of the total ex-works value of the new PO shall be recovered as overheads and the difference between the PO value of the old PO and the new PO shall not be considered for calculation of the recovery amount.
23.	ADJUSTMENT OF RECOVERY : Any amount payable by the Supplier / Contractor under any of the condition of this contract shall be liable to be adjusted against any amount payable to the Supplier / Contractor under any other Purchase Order / Contract awarded to him by any BHEL unit. This is without prejudice to any other action, as may be deemed fit, by BHEL.
24.	FORCE MAJEURE CONDITION : If by reason of war, civil commotion, act of god, Government restrictions, strike, lockout which are not in control of Supplier / Contractor the deliveries / services are delayed, Supplier / Contractor shall not be held responsible. If at any time during the continuance of the Purchase Order / Contract, the performance in whole or in part by either party of any obligations under the Purchase Order / Contract is prevented or delayed by reason of any war hostilities, acts of the public enemy, restrictions by Govt. of India, civil commotion, sabotage, fires, floods, explosion, epidemics, quarantine restrictions, strike, lock-outs or acts of God (hereinafter referred to as "event"), which are not in control of Supplier / Contractor or BHEL, then provided notice of the happening of such event is given by either party to the other within fifteen (15) days from the date of occurrence thereof, neither

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	party shall by reason of such event be entitled to terminate the Purchase Order / Contract nor shall have any claim for damages against each other in respect of such non-performance and delay in performance. Performance under the Purchase Order / Contract shall be resumed immediately after such event has come to an end or ceased to exist and decision of BHEL as to whether the deliveries have to be resumed or not shall be final, conclusive and binding on the parties hereto. In the event of the parties hereto not able to agree that a force majeure event has occurred, the parties shall submit the disputes for resolution pursuant to the provisions hereunder, provided that the burden of proof as to whether a force majeure event has occurred shall be upon the party claiming such an event. Notwithstanding above provisions, BHEL shall reserve the right to cancel the Purchase Order / Contract, wholly or partly, in order to meet the overall project schedule and make alternative arrangements for completion of delivery and other schedules.
25.	MANUFACTURING QUALITY PLAN (MQP) : Supplier to submit approved MQP in line with requirement of BHEL/customer.
26.	SUPPLIER PERFORMANCE MONITORING AND RATING SYSTEM : BHEL reserve the right for evaluation of Supplier Performance Rating as per Supplier Performance Monitoring and Rating System of BHEL for necessary action. Details are available at BHEL Website www.bhel.com for reference.
27.	DEALING WITH BANNED SUPPLIERS / CONTRACTORS IN BHEL : Offers of the bidders, who are on the banned list, as also the offers of the bidders who engage the services of the banned firms, shall be rejected. The list of banned firms is available on BHEL website www.bhel.com for reference.
28.	ORDER OF PRECEDENCE : The order of precedence shall be as follows :- - Special Terms & Conditions (STC) for Tender Enquiry / Contract, if any - General Terms & Conditions (GTC) for Tender Enquiry / Contract & Additional General Terms & Conditions (GTC) for Tender Enquiry / Contract for Erection Testing & Commissioning (ETC) at Site, if applicable Provisions in (a) above shall prevail over (b). In case of conflict, between Technical Specifications and STC / GTC, bidder to seek necessary clarifications from BHEL concerned official as specified in NIT.
29.	PACKING : Packing shall be in conformity with specifications and shall be such as to ensure prevention of damages, corrosion, deterioration, shortages, pilferage and loss in transit or storage. In case of shipment by sea or air, the packing shall be sea-worthy or air-worthy respectively and of international standards. Different types of spares i.e. start-up / commissioning spares and initial spares (mandatory spares and recommended O&M spares) are to be packed separately. Packing List shall be submitted as per standard format along with advance set of documents for claiming payment which shall also indicate :- - Case / Packing size (as applicable). - Gross weight and net weight of each package. - Detailed contents of the package with quantity of each item separately. Project, Item / Package Description, BHEL's PO No. with date & Case / Packing Mark should also be clearly mentioned on the Case / Packing and Packing List for identification. Also, Packing List must be duly signed & should include respective Invoice No. & LR No. Note: Foreign suppliers to furnish details to arrange inland transportation by BHEL, if applicable, as follows :-

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	i) No. of Packages ii) Size with Weight (Gross & Net) of each Package iii) No. of Containers with type & size required for inland transportation iv) Type of Cargo (Break Bulk / LCL / FCL) v) Customs Tariff No.
30.	COLOUR CODING : Aluminium stickers are required to be attached to large components but plastic sheet tags should be tied with small components, giving details like purchase order, description of the component, quantity etc. Tags should be of the colour as follows :- a) Main equipment : Yellow or White tag b) Start-up / Commissioning spares : Blue tag c) Mandatory spares : Pink or Red tag d) Recommended / O&M spares : Green tag
31.	MICRO, SMALL & MEDIUM ENTERPRISES (MSME) : MSMED Act 2006 as amended from time to time & extant regulations of Govt. of India for MSME will be applicable. Micro & Small Enterprises (MSE) can avail the intended benefits only if they submit along with the offer / bid, attested copies of either Acknowledgement of Entrepreneur Memorandum Part-II (EM-II certificate) having deemed validity (five years from the date of issue of acknowledgement in EM-II) or valid NSIC certificate or EM-II certificate along with attested copy of a CA certificate (As per BHEL format where deemed validity of EM-II certificate of five years have expired) applicable for the relevant financial year (latest audited). Date to be reckoned for determining the deemed validity will be the date of opening (for Techno-commercial Bid: Part-I in case of two part bid). Non-submission of such documents will lead to consideration of their bid at par with other bidders. No benefit shall be applicable for this enquiry if any deficiency in the above required documents are not submitted before price bid opening. If the tender is to be submitted through e-procurement portal, then the above required documents are to be uploaded on the portal. Documents should be notarized or attested (in original) by a Gazetted officer. Copy of Udyog Aadhaar Memorandum with Acknowledgement of Ministry of Micro, Small & Medium Enterprises should also be furnished.
32.	BUSINESS ETHICS / SUSPENSION OF BUSINESS DEALINGS WITH SUPPLIERS / CONTRACTORS : If any bidder / supplier / contractor during pre-tendering / tendering / post tendering / award / execution / post-execution, indulges in malpractices cheating, bribery, fraud or other misconduct or formation of cartel so as to influence the bidding process or influences the price or fails to perform or is in default without any reasonable cause etc or performs any act considered objectionable as per extant guidelines, action may be taken against such bidders/supplier/contractor as per extant "Guidelines for Suspension of Business Dealings with Suppliers/Contractors". Abridged version of same is available at BHEL website (www.bhel.com) on "Supplier Registration" Page.
33.	REVERSE AUCTION : BHEL reserve the right to go for Reverse Auction (RA) instead of opening the sealed envelope price bid, submitted by the bidder or price bid submitted by the bidder through e-procurement system. This will be decided after techno-commercial evaluation. All bidders to give their acceptance for participation in RA. Non-acceptance to participate in RA may result in non-consideration of their bids, in case BHEL decides to go for RA. In case BHEL decides to go for Reverse Auction, only those bidders who have given their unconditional acceptance to participate in RA will be allowed to participate in the Reverse Auction. Those bidders who have given their acceptance to participate in Reverse Auction will have to necessarily submit "online sealed bid" in the Reverse Auction. Non-submission of "online sealed bid" by the bidder will be considered as tampering of the tender process and will invite action by BHEL as per

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	extant guidelines in vogue. General Terms and Conditions of RA are available at Annexure. Business Rules for RA shall be sent to the bidders before conducting RA. Abridged Version of "Common Guidelines for Conducting Reverse Auction" may also be seen at BHEL website (www.bhel.com) on "Supplier Registration" Page & "Tender Notifications" Page.
34.	INTEGRITY PACT : Bidders shall have to enter into Integrity Pact with BHEL, duly signed with seal in original, if specified in NIT / RFQ failing which bidder's offer shall be liable for rejection.
35.	TERMINATION OF CONTRACT : BHEL shall have the right to cancel the Purchase Order / Contract without any financial implication to BHEL if vendor approval by end user / customer is withdrawn or in case of Suspension of Business Dealings with the Suppliers / Contractors by BHEL. BHEL shall have the right to cancel Purchase Order / Contract, wholly or in part, in case they are obliged to do so on account of any decline, diminution, curtailment or stoppage of their business and in that event, the Supplier's / Contractor' compensation claim shall be settled mutually. In case of cancellation of Purchase Order / Contract for main supply, all other associated Purchase Orders / Contracts like those for Mandatory Spares / Recommended Spares / Erection, Testing & Commissioning (ETC) / Supervision of ETC, if any, would also get cancelled.
36.	SHELF LIFE : Supplier has to inform the list of the items / sub-items which have limited shelf life like consumables or those required for the first fill and shall indicate the corresponding shelf life period in the offer. Such items / sub-items shall be manufactured / despatched only after getting formal clearance from BHEL.
37.	LIMITATION OF LIABILITY : Notwithstanding any other provisions, except in cases of wilful misconduct and / or criminal negligence / acts, a) Neither the Supplier / Contractor nor BHEL shall be liable to the other, whether in Purchase Order / Contract, tort, or otherwise, for any consequential loss or damage, loss of use, loss of production or loss of profits or interest costs, provided however that this exclusion shall not apply to any obligation of the Supplier / Contractor to pay Liquidated Damages to the BHEL and b) Notwithstanding any other provisions incorporated elsewhere in the contract, the aggregate liability of the Contractor in respect of this contract, whether under the Contract, in tort or otherwise, shall not exceed total Contract Price, provided however that this limitation shall not apply to any obligation of the Vendor to indemnify BHEL with respect to Patent Infringement or Intellectual Property Rights.
38.	SHORTAGES / DAMAGES : a) Against Supply only or Supply where Supervision of Erection, Testing & Commissioning (ETC) at Site or Supply where Testing & Commissioning at Site is in scope of the supplier : Any shortages and / or damages in supplies shall be supplied / replenished free of cost by the supplier as early as possible but not later than 30 days from the date of intimation by BHEL to the supplier. b) Against Supply where Erection, Testing & Commissioning (ETC) at Site is in

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	scope of the supplier : Any shortages and / or damages in supplies and during handling / storage, erection, testing and commissioning at site shall be supplied / replenished free of cost by the Supplier / Contractor, as early as possible, to meet the contractual completion time / schedule. Note: There shall not be any extension in the contractual delivery time / schedule due to any shortages and / or damages in supplies.
39.	VARIATION OF CONTRACT VALUE / QUANTITY VARIATION : BHEL shall have the right to variation in quantities of items within $\pm 30\%$ of the total Purchase Order / Contract value at the time of placement of PO or award of Contract on overall basis for all amendments together within two years from the date of original Purchase Order / Contract or completion of execution of the Purchase Order / Contract whichever is earlier but quantities of individual items may vary to any extent or may get deleted unless otherwise specified in the technical specifications. No compensation is payable due to variation in the quantities and the Supplier / Contractor shall be bound to accept the same the contracted prices / rates without any escalation. However, if the Purchase Order / Contract is on "Lumpsum" basis, no variation of Purchase Order / Contract value shall be admissible to the Supplier / Contractor within the scope of Purchase Order / Contract, as long as the inputs remain unchanged.
40.	STATUTORY VARIATION : GST rates prevailing at the time of dispatch of goods/ completion of services shall be payable by BHEL. All other taxes, duties, charges, royalty, cess, other levies shall be deemed to be included in the Ex Works Prices /Charges quoted by bidders and no variations shall be payable in respect thereof. No other variations such as on customs duty, exchange rate, minimum wages, prices of controlled commodities, any other input etc. shall be payable by the BHEL. Notwithstanding anything above, where the actual completion of the supply / services occurs beyond the period stipulated in the Purchase Order / Contract or any extension thereof, variations referred to above, will be limited to the rates prevailing on the dates of such agreed completion periods only. For variations after the agreed completion periods, the Supplier / Contractor alone shall bear the impact for the upward revisions and for downward revisions BHEL shall be given the benefit of reduction in applicable taxes /GST. This will be without prejudice to the levy of liquidated damages for delay in delivery / completion. If new tax is introduced by Central/State Govt. / Municipality becomes directly applicable on items specified in Bill of Quantities/Purchase Order/Contract, full reimbursements shall be made provided it becomes applicable on items specified in Bill of Quantities. However, any additional tax implication due to delay in delivery, beyond the Contractual Delivery, attributable to supplier shall be borne by supplier.
41.	MODE OF PAYMENT : Payment shall be made directly to the Supplier / Contractor by BHEL through NEFT / RTGS.
42.	CONFIDENTIALITY : Supplier / Contractor shall, at all times, undertake to maintain complete confidentiality of all data, information, software, drawings & documents etc. belonging to BHEL and also of systems, procedures, reports, input documents, manuals, results and any other BHEL documents discussed and / or finalized during the course of execution of Purchase Order / Contract.
43.	INDEMNIFICATION : The Supplier / Contractor shall indemnify and keep indemnified and hold harmless

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	BHEL and its employees and officers from and against any and all claims, suits, actions or administrative proceedings, demands, losses, damages, costs and expenses and any other claim of whatsoever nature in respect of the death or injury of any person or loss of or damage to any property arising during the course and out of the execution of the Purchase Order / Contract.
44.	TITLE OF GOODS : a) Ownership of the equipment / material procured in India, shall be transferred to BHEL upon loading on to the mode of transport to be used for transportation of the said equipment / material from the works to the site / destination and upon endorsement of the dispatch documents in favour of BHEL. b) Ownership of the equipment / material to be imported into the country where the site is located, if not procured in India, shall be transferred to BHEL upon loading on the mode of transport to be used for transportation of the equipment / material from the country of origin to that country / destination and upon endorsement of despatch document in favour of BHEL. c) Notwithstanding the transfer of ownership of the equipment / material, the responsibility for care and safe custody thereof together with the risk of loss or damage thereto for whatsoever reason shall remain with the Supplier.
45.	COMPLIANCE OF STATUTORY REQUIREMENTS : The vendor shall comply with all State and Central Laws / Acts, Statutory Rules, Regulations etc., as may be enacted by the Government during the tenure of the Purchase Order / Contract and having in force and applicable to the Purchase Order / Contract and nothing shall be done by the Supplier / Contractor in contravention of any Law / Act and / or Rules / Regulations, thereunder or any amendment thereof. The Supplier / Contractor shall pay all taxes, fees, licence charges / deposits, duties, tolls, royalty, commissions or other charges which may be levied on account of any of his operations connected with the Purchase Order / Contract. In case BHEL is constrained to make any of such payments, BHEL shall recover the same from the Supplier / Contractor either from moneys due to him or otherwise as deemed fit.
46.	ACCEPTANCE OF ORDER : Supplier should acknowledge and accept the Letter of Award / Purchase Order issued by BHEL within 7 days of the issue of Letter of Award / Purchase Order. In case of any discrepancy / typographical error in issue of Purchase Order / Contract, the agreed terms & conditions, scope of work, rates / prices for placement of PO / award of contract shall be applicable and BHEL reserves the right to issue amendment(s) to PO / Contract for correction of discrepancies / typographical errors in the PO / Contract at a later date.
47.	FRAUD PREVENTION POLICY : The Bidder along with its associate / collaborators / sub-contractors / sub-vendors / consultants / service providers shall strictly adhere to BHEL Fraud Prevention Policy displayed on BHEL website http://www.bhel.com and shall immediately bring to the notice of BHEL Management about any fraud or suspected fraud as soon as it comes to their notice.

Signature of Bidder (Authorized Signatory) with Date & Seal

ENQUIRY NO. 958E123

Dated: 02.07.2018

BHEL/TBG/S01/01

CHECKLIST

SCHEDULE OF INFORMATION TO BE FURNISHED WITH THE OFFER

NOTE: This format is to be submitted in original only, duly filled in. Reproduction of this format on bidder's letter head or on other paper is not acceptable.

Put a tick mark on "YES" if the information is enclosed with the offer or put a tick mark on "NO" if the information is not enclosed or write "NOT APPLICABLE" if the information is not applicable.

1.	Technical offer with detailed schedule of equipment / material and spares enclosed.	YES / NO
2.	Guaranteed Technical Particulars as per Section – 4 enclosed.	YES / NO
3.	Schedule of deviation, if any, clause wise with respect to Technical Specification enclosed.	YES / NO
4.	Standard Manufacturing Quality Plan enclosed.	YES / NO
5.	GA Drawings with dimensions and weights & foundation / fixing details enclosed.	YES / NO
6.	Drawing and Data submission schedule enclosed.	YES / NO
7.	Type Test Reports enclosed.	YES / NO
8.	Bar Chart showing the schedule indicating time required for design, manufacture, test and inspection, transport, erection, site testing and commissioning enclosed.	YES / NO
9.	Makes of all components as per technical Specification enclosed.	YES / NO

The above checklist is verified for:-

Offer Ref. :

Equipment :

Submitted by : M/s

Project Reference. :

Signed with Seal

Date

SCHEDULE OF PRICE (Part II)
(BIDDER TO STRICTLY ENSURE SUBMITTING THE PRICE BIDS IN THIS FORMAT)

Enquiry No. 958E123, dated 02/07/2018														
A	B		D	E	F	G		H	I	J	K		L	M
	Name of item	HSN/SAC Code	Unit	Qty.	Unit Price Ex-works	Total Ex-Works	GST @__ on Ex-works	Unit Freight	Total Freight	GST @__ on freight	Unit Insurance	Total Insurance	GST @__ on Insurance	TOTAL (FOR Destination) PRICE (Rs.)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	500A primary injection kit		Nos.	2										
Total														

Note:

1.It is certified that M/s_____have quoted as per the specified price format of the tender, otherwise offer shall be liable for rejection.

SCHEDULE OF PRICE (Part II)
(BIDDER TO STRICTLY ENSURE SUBMITTING THE PRICE BIDS IN THIS FORMAT)

Enquiry No. 958E123, dated 02/07/2018														
A	B		D	E	F	G		H	I	J	K		L	M
	Name of item	HSN/SAC Code	Unit	Qty.	Unit Price Ex-works	Total Ex-Works	GST @__ on Ex-works	Unit Freight	Total Freight	GST @__ on freight	Unit Insurance	Total Insurance	GST @__ on Insurance	TOTAL (FOR Destination) PRICE (Rs.)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	5kV insulation tester		Nos.	2										
2	Demonstration and training at site of 5kV insulation tester		Lot	2										
	Total													

Note:

1.It is certified that M/s_____ have quoted as per the specified price format of the tender, otherwise offer shall be liable for rejection.

SCHEDULE OF PRICE (Part II)

(BIDDER TO STRICTLY ENSURE SUBMITTING THE PRICE BIDS IN THIS FORMAT)

Enquiry No. 958E123, dated 02/07/2018														
A	B		D	E	F	G		H	I	J	K		L	M
	Name of item	HSN/SAC Code	Unit	Qty.	Unit Price Ex-works	Total Ex-Works	GST @__ on Ex-works	Unit Freight	Total Freight	GST @__ on freight	Unit Insurance	Total Insurance	GST @__ on Insurance	TOTAL (FOR Destination) PRICE (Rs.)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Four pole digital earth tester		Nos.	2										
2	Demonstration and training at site of Four pole digital earth tester		Lot	2										
	Total													

Note:

1.It is certified that M/s_____ have quoted as per the specified price format of the tender, otherwise offer shall be liable for rejection.

SCHEDULE OF PRICE (Part II)
(BIDDER TO STRICTLY ENSURE SUBMITTING THE PRICE BIDS IN THIS FORMAT)

Enquiry No. 958E123, dated 02/07/2018														
A	B		D	E	F	G		H	I	J	K		L	M
	Name of item	HSN/SAC Code	Unit	Qty.	Unit Price Ex-works	Total Ex-Works	GST @__ on Ex- works	Unit Freight	Total Freight	GST @__ on freight	Unit Insurance	Total Insurance	GST @__ on Insurance	TOTAL (FOR Destination) PRICE (Rs.)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Hand held digital multimeter		Nos.	2										
	Total													

Note:-

1.It is certified that M/s _____ have quoted as per the specified price format of the tender, otherwise offer shall be liable for rejection.

SCHEDULE OF PRICE (Part II)
(BIDDER TO STRICTLY ENSURE SUBMITTING THE PRICE BIDS IN THIS FORMAT)

Enquiry No. 958E123, dated 02/07/2018														
A	B		D	E	F	G		H	I	J	K		L	M
	Name of item	HSN/SAC Code	Unit	Qty.	Unit Price Ex-works	Total Ex- Works	GST @__ on Ex- works	Unit Freight	Total Freight	GST @__ on freight	Unit Insurance	Total Insurance	GST @__ on Insurance	TOTAL (FOR Destination) PRICE (Rs.)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	DC earth fault locator		No.	1										
Total														

Note:

1.It is certified that M/s_____ have quoted as per the specified price format of the tender, otherwise offer shall be liable for rejection.



BHARAT HEAVY ELECTRICALS LIMITED
TRANSMISSION BUSINESS ENGINEERING MANAGEMENT
NEW DELHI

DOCUMENT No.	TB-368-316-025A	Rev	01		Prepared	Checked	Approved
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CUSTOMER Doc. No.		NAME	SK	SK	DM/RS
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TYPE OF DOC.	TECHNICAL SPECIFICATION	SIGN	-SD-	-SD-	-SD-
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TITLE SPECIFICATION FOR TESTING EQUIPMENTS	DATE	06.02.18		
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	GROUP	TBEM		
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	W.O. No	83012		
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CUSTOMER	MADHYA PRADESH POWER TRANSMISSION LTD.
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PROJECT	Construction of new 400 kV sub stations, transmission lines and
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	Augmentation work/feeder bay work on total turnkey basis (Lot no. 1)
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	Balaghat, Badnawar, Bhopal, Chhegaon and Nagda
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CHECKLIST FOR OFFER

Along with the Technical Bids of the offers, the Bidder should submit this checklist confirming the inclusion of the enclosures as listed below. (Shall tick as ✓)

Sr No	Documents to be enclosed	Bidder to check & confirm
1	Copy of Unpriced BOQ as enclosed in the Technical Specification to confirm that bidder has quoted in the same format	
2.	Schedule of Technical Deviation format duly signed.	
3.	Supporting documents as asked in the Technical PQR (if applicable)	
4.	Checklist of Technical parameters as per Section-4 duly filled and signed.	

NOTE:- If the Bidder fails to submit any of the documents as asked in the above check list, their bid is likely to be rejected / not evaluated.

The above checklist is verified for:-

NIT Ref No. :

Name of Equipment :

Name of Project :

Name of Bidder :

Signed with Seal of Bidder.

Date

SECTION - I

Scope, Quantities and Specific Technical Requirements

1.1 Scope:

This specification is intended to specify the requirements for Supply of operation & maintenance test equipment & tools required at the sites as mentioned in subsequent clause. The scope of work shall encompass at least the following:

- i) Inspection and testing before supply
- ii) Packing, Loading & Transportation to site
- iii) Providing engineering data, drawings, Brochures and O & M manuals for BHEL/MPPTCL review, approval and records.

1.2 The instruments are required for the following Projects.

Name of the Customer : Madhya Pradesh Power Transmission Company Ltd.

Name of the Project : Construction of new 400 kV sub stations, transmission lines and Augmentation work/feeder bay work on total turnkey basis (Lot no.- 1) - Balaghat, Badnawar, Bhopal, Chhegaon and Nagda

1.3 Bill of quantities:

S. No.	Item Description	Unit	Quantity	
			Balaghat (Kirnapur)	Badnawar
1.	500A primary injection kit	No	1	1
2.	5kV insulation tester	No	1	1
3.	Four pole digital earth tester	No	1	1
4.	Hand held digital multimeter	No.	1	1
5.	DC earth fault locator	No.	1	0
6.	Demonstration and training at site of 5kV insulation tester	Lot	1	1
7.	Demonstration and training at site of Four pole digital earth tester	Lot	1	1

Note:

1. Evaluation of above items shall be done item wise. (1, 2 & 6, 3 & 7, 4, 5)
2. The Make and model of instruments shall be as per enclosed Annexure-A (rev - 01) only.
3. The training at site shall cover operation, evaluation/analysis of test results and general trouble shooting about the test equipment.

4. All the above listed equipments shall be supplied with accessories as per section -2 of technical specification. Any other item or accessories, which are essentially required for satisfactory operation of equipment's & for meeting requirements of this specification shall be deemed to be within scope of the successful bidder irrespective of whether these are specifically indicated here or not.
5. Following documents should be submitted along with the offer:
 - i) Catalogue and Data sheet of offered instrument.
 - ii) List of Past supplies in India & abroad.
 - iii) Deviations if any in Technical Deviation schedule.

1.4 Specific Technical Requirements:

1. The Test equipment shall be delivered to the Employer in new/ fresh condition.
2. Supplier shall provide valid calibration certificate, test certificate & warranty certificate for the quoted test equipments (As applicable), in the event of order.
3. Supplier should have adequate **"after sales service facility"** in India.
4. Supplier is required to give an undertaking "to address issue of warranty / after sales services from the respective manufacturer of the equipment".
5. Bidder should provide **"Authorised Distributor Certificate" from original Manufacturer/OEM** of the offered test equipment. Authorized Distributor Certificate not issued by **original manufacturer/OEM** of the offered test equipment is not acceptable.
6. The instrument is intended for use in Extra high-voltage substation (up to 400kV) and industrial environment. The testing equipments are generally meant for carrying out testing at site and movement from one place to another is unavoidable. Therefore equipment shall be robust in design so that it gives desired performance even in adverse site conditions. Necessary transport packing arrangement shall be provided along with the equipment.

1.5 INSPECTION & TESTING:

All the equipments shall be inspected prior to dispatch in line with relevant IS, approved GTP/ drawing/Catalogue and technical specification, BHEL/ MPPTCL approved QAP.

Annexure-A(rev -01)
Make and Model of Testing equipment's
Project - Balaghat (Kirnapur) and Badnawar project of MPPTCL

Sl.no	Instrument	Make	Model
1.	5kV insulation tester	The Motwane Manufacturing Co. Pvt. Ltd	5KPI
		Megger , U.K. England	MIT 525
2.	Four pole digital earth tester	Megger , UK	DET4TCR2
		Megger , England	DET4TCR2
3.	500A primary injection kit	Motwane	MOT PIK
4.	Hand held digital Multimeter	Motwane	
		Meco	
5.	DC earth fault locator	CSD Instrument pvt. Ltd. ,Jaipur	T-DCEFL
		DC TRACE	DC TRACE
		Digit Race	DC 4SIP

Smita
23/06/18

SECTION-II

TECHNICAL SPECIFICATION FOR 500 AMP. PRIMARY INJECTION KIT

GENERAL

The instrument should check all parts of protection system by injecting current drawn by system the cable/busbars. The instrument should ascertain the current carrying capacity of any conductor, connector or calibration of CTs/bimetallic relays.

TECHNICAL REQUIREMENT

1. The instrument should be built in Digital ammeters for display of test current of accuracy better than 1%
2. The instrument should be able to measure time interval from 0.0001 Sec to 999 Sec.
3. The supply voltage should be 230 V AC, 50Hz.
4. The output voltage should be 0-20V at 500A
5. The output current ranges should be 0 to 500A
6. The instrument should be natural air cooled type
7. The instrument should have minimum 20 min. duty cycle higher duty cycle kits shall also be acceptable
8. Supplier must have adequate "after sales service" facility in India.
9. The Kit shall be supplied alongwith all accessories including oil and copper cable set (2x15 meter length), clamps & connectors, spare fuses, indication lamp, power supply cable etc. all that required for carrying measurement for one unit.
10. The copper cable shall be of adequate size to deliver the rated current of 600 Amp. for minimum 20 minutes.

SECTION II (A)

TECHNICAL SPECIFICATION FOR 5 KV INSULATION RESISTANCE TESTERS

1.0 SCOPE: This specification covers the manufacture, testing and supply of 5 KV Digital Insulation Testers. The offers shall include all accessories even though not specifically mentioned in this specification, but which are essential for satisfactory operation of the equipment offered as a whole.

2.0 MATERIAL AND WORKMANSHIP: All the materials used for the manufacture of the equipment shall be of the best quality and the design and workmanship shall be of the highest order, so as to ensure satisfactory operation at full capacity over its full life.

3.0 5 KV DIGITAL INSULATION TESTERS : The Insulation Testers shall be compact, light weight, 3 digit digital insulation tester. The 5 KV digital insulation tester shall be compact, light weight, 3 digit digital insulation tester. The Insulation Tester shall be supplied with suitable software to allow for further analysis of tests results, including features such as graphical representation and automatic report generation. The Insulation Tester shall provide safe, reliable and accurate measurements of insulation resistances up to 10 TΩ, with selectable test voltages, 250 V - 5 kV in steps of 50V.

The operation of Insulation Tester shall be microprocessor controlled and it shall have features such as auto-range selection, memory for 1000 readings, AC/DC voltmeter, automatic measurement of Insulation Resistance, Dielectric Absorption Index, Polarization Index, Dielectric discharge test, Breakdown Voltage Test, Step voltage test, leakage current and capacitance measurement. Timer enabling programming of test duration, & real time clock shall be provided. Built-in chronometer, indicating remaining time in minutes and seconds, since the test started, up to 99 minutes.

It shall be possible to transmit Measured values through the isolated serial output (RS-232). Storage of about 1000 measured values in a non-volatile internal memory which can be transferred to a PC and the supplied software by Insulation Tester shall allow further analysis of the test results, including a graphical representation & automatic report generation. The real time clock, and the sequential test number, shall facilitate the identification of each test, and the organization of a predictive maintenance system by trend analysis.

The Insulation Tester shall be powered using a rechargeable battery and supplied with an automatic inbuilt charger operating on 240 V +/- 10% , 50Hz mains supply. The battery backup shall not be less than 5Hours of typical use with fully charged battery. The cabinet of Insulation Tester shall be IP 65 rated, strong, lightweight, easy to carry, impact-resistant and suitable to be used under severe weather conditions.

The instrument must be IEC 61010-1 to 600V phase to earth, Category IV and IP54 Protected.

3.1 FEATURES:

- Microprocessor controlled
- Insulation resistances up to 10 TΩ
- Auto-range
- Digital & bar-graph reading

- Tests Regimes:
 - Absorption index
 - Polarization index
 - Dielectric Discharge
 - Step Voltage Test
 - Breakdown Voltage Test
 - Capacitance
 - Leakage current
 - AC/DC voltmeter
- Chronometer up to 99 minutes
- Real time clock
- 1000 readings memory
- Isolated RS-232 data port
- Software for data management
- Rechargeable battery Selectable
- Selectable test voltage of 250 & 5000 V DC in steps of 50V.
- The Insulation Tester should have self calibration checkup at every startup.
- The Insulation Tester shall be equipped with High Voltage terminal, Measurement & Guard terminal. These terminals shall be suitably marked for easy identification.
- The Insulation Tester shall be equipped with audio & visual indication for the test ON condition.
- The Insulation Tester shall discharge the test object after every test.
- The Insulation Tester should have three programmable timers for conducting diagnostic tests.

3.2 Accessories to be supplied with each 5 KV Insulation Tester:

- a. 2 x Measuring test leads (IEC 61010-031)
- b. 1x GUARD test lead
- c. Charger power cord
- d. Software CD
- e. RS-232 cable
- f. Protective bag
- g. Operating instructions
- h. software
- i. Test & calibration sheet.
- j. Fuses

4.0 The Insulation Testers shall be suitable for insulation measurements during installation, servicing and maintenance work in charged substations. The instrument shall be suitable for testing Transformers, Switch Gears, relays, switches and contactors.

5.0 Technical Particulars:

No.	Particulars	Requirement of 5 KV Insulation Tester
1	Resistance	Max 10 TΩ @ 5 kV ± 5 % of reading up to 1 TΩ @ 5 kV ± 20 % of reading up to 10 TΩ @ 5 kV
2	Out put Voltages	Selectable test voltage of 250 & 5000 V DC in steps of 50V.
3	Current	3mA
4	Input Power	230V AC±10%, 50Hz±10%
5	Response Time	< 15 seconds

No.	Particulars	Requirement of 5 KV Insulation Tester
6	Display Display Update Over Range Indication	3 digit LCD, 1000 counts Current battery status 2.5 readings/sec ">" is displayed in most significant digit
7	Environment	(a) Operating Temperature Range : 0 °C to 50 °C (b) Storage Temperature Range -10 °C to 60 °C (c) Humidity Range 95% RH (non condensing) (d) Environmental Protection: IP 65 (with closed lid) (e) Safety Class Meets the requirements of IEC 61010-1 (f) E.M.C: In accordance with IEC 61326-1 (g) Type tested as per IS 11994 (h) CE marking
8	Physical	5 kg(Approx)

7.0 TRAINING: Subsequent to delivery of 5KV Insulation Testers, demonstration & Training for 1 to 2 days period to a batch of our engineers shall be provided by the supplier on "free of cost" basis for each Equipment supplied by the supplier. The training shall cover operation, evaluation/analysis of test results and general trouble shooting about the equipment.

8.0 SCOPE OF SUPPLY : Each 5KV Insulation Testers shall consist of following

- 5KV Insulation Tester in rugged case
- Accessories - Kit should be supplied with IEC 61010-031 complied 10 meter long testing leads. With maximum jaw opening span of 40mm, software CD, RS232 Cable,
- Operating instruction & Test Certificate

9.0 Any other item or accessories, which are essentially required for satisfactory operation of equipment & for meeting requirements of this specification shall be deemed to be within scope of the Tenderer irrespective of whether these are specifically indicated here or not.

ANNEXURE I

TECHNICAL REQUIREMENT OF 5 KV INSULATION TESTER

No.	Particulars	Requirement of 5 KV Insulation Tester
1	Resistance	Max 10 TΩ @ 5 kV ± 5 % of reading up to 1 TΩ @ 5 kV ± 20 % of reading up to 10 TΩ (for lower test voltages, the upper limit will be reduced proportionally)
2	Output Voltages	250V to 5000V in steps of 50V
3	Current	3mA
4	Input Power	230V AC±10%, 50Hz±10%

No.	Particulars	Requirement of 5 KV Insulation Tester
5	Response Time	< 15 Seconds
6	Display Display Update Over Range Indication	3 digit LCD, 1000 counts Current battery status 2.5 readings/sec ">" is displayed in most significant digit
7	Environment	(a) Operating Temperature Range : 0 °C to 50 °C (b) Storage Temperature Range -10 °C to 60 °C (c) Humidity Range 95% RH (non condensing) (d) Environmental Protection: IP 65 (with closed lid) (e) Safety Class Meets the requirements of IEC 61010-1 (f) E.M.C: In accordance with IEC 61326-1 (g) Type tested as per IS 11994 (h) CE marking
8	Physical	5 kg (Approx)

SECTION II (F)

TECHNICAL SPECIFICATION FOR EARTH TESTER

1.0 The Earth Tester shall allow measurement of Earth Resistances (three pole) and Ground Resistivity by the Wenner's (four pole) method, It shall have a built-in voltmeter that shall enable measurement of spurious voltages of the soil, caused by surface leakage currents. The Earth Tester shall be suitable for measurements of earth resistances of lightning-conductors, substations yard etc. The internal generator of Earth Tester shall inject alternated current on the soil through an auxiliary rod. The voltage generated over the earth resistance shall be measured by the Tester. Results shall be shown in a digital display with up to 3 ½ digits resolution. The test current shall be automatically regulated. A sharp and intermittent audible signal shall be provided to indicate anomalies in the circuit if, for any reason, the current is lower than the value required to perform the measurement, the alarm circuit that produces the intermittent "beep", shall be activated.

2.0 BASIC FEATURES

The earth tester shall be of the four pole type for measuring earth electrode resistance and soil receptivity. It shall be of the battery operated digital type. Hand-crank type shall not be accepted.

The equipment shall be of rugged construction, suitable for field use and complete with 04 Nos. ground probes, necessary length of test leads, terminal shorting bars and robust carrying case. (Length of test leads shall be sufficient to carry out the tests according to BS 7430).

The equipment shall be powered by an Internal re-chargeable battery, charged by built in battery charging unit. The battery charging unit shall be suitable for operation on 230 V/ 50HZ AC supply.

3.0 TECHNICAL PARTICULARS:

- DIGITAL AND AUTOMATIC
- 3 ½ DIGITS DISPLAY
- GROUND RESISTIVITY (WENNER'S METHOD)
- SPURIOUS VOLTAGE MEASUREMENT
- HIGH SPURIOUS VOLTAGE REJECTION
- UP TO 20 K RESISTANCE RANGE
- RESISTANCE RANGE : 0 to 2 ohm
- RESOLUTION : 0.01
- ACCURACY : Earth resistance measuring : 2% of reading 1% of full scale
- POWER SUPPLY : Built-in rechargeable battery
- WEIGHT : Equipment: ≤ 2 kg
- BATTERY STATUS CHECK : Push-button to measure the batteries charge status.
- TEMPERATURE : Working / Storage 0 to + 50°C
- HUMIDITY : Up to 95% RH, non condensing

4.0 ACCESSORIES TO BE SUPPLIED WITH EARTH TESTER

1. steel rods, copper, 45cm long.

- II. 4 rod extractors and wind-up handle.
- III. Battery charger.
- IV. Complete test leads set, containing 4 test cables
- V. User's manual and CD.

5.0 TRAINING: Subsequent to delivery of DCRM Set, demonstration & Training for 1 to 2 days period to a batch of our engineers shall be provided by the supplier on "free of cost" basis for each Equipment supplied by the supplier. The training shall cover operation, evaluation/analysis of test results and general trouble shooting about the equipment.

6.0 Any other item or accessories ,which are essentially required for satisfactory operation of equipment & for meeting requirements of this specification shall be deemed to be within scope of the tenderer irrespective of whether these are specifically indicated here or not.

TECHNICAL SPECIFICATION FOR MULTIMETER

1. The hand held Digital multimeter shall be suitable for measurement of RMS AC voltages & currents, DC voltages & current, capacitance, frequency, wattage, inductance, continuity. The four & half digit DMM shall be suitable for operating temp of 0 to 40 degree C.

2. The auto ranging DMM shall have following resolution

AC Current	100 mA/1mA
DC voltage	10 micro volt/100 milli volt
AC voltage	10 micro volt/100 milli volt
Resistance	0.01 Ohm / 1 K Ohm
Time	1 sec / 9999 min
Frequency	1 Hz / 1 KHz
Capacitance	20 nF/200 Micro Farad
Wattage	0.1W/1W
Inductance	200 mH

3. The DMM shall have built in features such as safety shutter, high energy fuse, over load alert, and shall have 3 year warranty. The DMM shall be supplied with standard accessories such as pair of test leads, operating & calibration manual, spare fuse.

4. ~~The equipment offered shall be of reputed make.~~

Technical Specification of DC Earth Fault Locator

The instrument should be compact ,light weight and easy to use.The instrument should be able to carry out the test in online condition ,i.e. no isolation /shut down of battery system required .It should be able to detect ,track and locate grounding faults developed in floating DC system thereby increasing the reliability of system.

Technical Requirements.

- 1.The instrument should be in two part viz.signal generator and signal receiver.
- 2.The signal generator should have selectable output voltage ranges of 12 to 50 Volts with a selectable low frequency range to avoid interference of the system and carry out test accuracy.
- 3.The instrument should be able to detect the high resistance fault upto 400 Kilo ohms and the corresponding measurement range should be 1 ohm to 400 Kilo ohm.
- 4.The Receiver unit should provide audible alarm.
5. The instrument should have adjustable output frequency on signal receiver to avoid interference from DC system itself.
- 6.The signal receiver should have adjustable sensitivity allowing the user to locate the earth leakage quickly in different location of circuit.

SECTION-3

3.0 GENERAL

This section stipulates the General Technical Requirements under the Contract and will form an integral part of the Technical Specification.

The provisions under this section are intended to supplement general requirements for the materials, equipments and services covered under other respective sections and are not exclusive. However in case of conflict between the requirements specified in this section and requirements specified under other sections, the requirements specified under respective sections shall hold good.

3.1 PROJECT INFORMATION AND SYSTEM PARAMETERS

a)	Customer/ Purchaser/ Owner	Madhya Pradesh power Transmission company Ltd.				
b)	Project Title	Construction of new 400 kV sub stations, transmission lines and Augmentation work/feeder bay work on total turn key basis (Lot no. 1) – Balaghat , Badnawar, Bhopal, Chhegaon and Nagda substation				
c)	Location	Balaghat	Badnawar	Bhopal	Chhegaon	Nagada
		Balaghat is Located in district of Balaghat of Madhya Pradesh. Distance between Jabalpur to Balaghat is 232 km by Road and 130 km by Rails.	Badnawar is Located in district of Dhar of Madhya Pradesh. Distance between Badnawar to Ujain is 70 km by Road .	Bhopal site is located 20 km away from Bhopal city.	Chhegaon is located in Khandwa district of Madhya Pradesh . Distance between Chhegaon to Khandwa is 15 km by Road.	Nagda is located in Ujjain district of Madhya Pradesh. The road distance between Nagda to Ujjain is 47 km
d)	Transport Facilities	Road/Rail				
e)	Postal Address	To follow				
SITE CONDITIONS						
a)	Maximum ambient air temperature	50°C				
b)	Minimum ambient air temperature	1°C				
c)	Average daily ambient temperature	35°C				
d)	Maximum Relative	95 %(sometimes approach saturation)				

	humidity	
e)	Pollution Severity	Heavily Polluted
f)	Seismic level (horizontal acceleration)	0.3g
g)	Wind zone as per IS 802 (PART 1) - 1995velocity	4
h)	maximum wind pressure	150kg/sq.mts
i)	Average annual rainfall	1250 mm
j)	Maximum altitude above mean sea level	1000m
k)	Isolcraunic level	90 days per year
l)	Climate	Moderately hot & humid tropical climate , conducive to rust & fungus growth

AUXILIARY POWER SUPPLY

3 phase A.C power supply	415V 50 Hz, 3-phase 4 wire, solidly earthed
1 phase A.C power supply	240V ,50 Hz, 1-phase , 2 wire
D.C. power supply	220V , 2-wire ungrounded, for all equipments and panels except PLCC of 400kV /220kV /132kV /33kV substation
D.C. power supply	48V , 2 wire system positively earthed for PLCC

The above supply voltage may vary as below and all devices shall be suitable for continuous operation over entire range of voltage.

i.	AC supply	Voltage + 10 % to -25% , frequency $\pm$ 4%
ii.	DC supply	Voltage + 10 % to -20%

3.2 GENERAL TECHNICAL REQUIREMENT

3.2.2 CODES AND STANDARDS

All materials and equipment shall generally comply in all respect with the latest edition of relevant international electro-technical commission (IEC) or any other internationally accepted standard which ensure equal or better quality or relevant Indian standard(IS) mentioned against each equipment and this specification.

3.3 MATERIAL/WORKMANSHIP

3.3.1 General Requirement

Where the specification does not contain characteristics with reference to workmanship, equipment, materials and components of the covered Equipment it is understood that the same

must be new, of highest grade of the best quality of their kind conforming to best engineering practice and suitable for the purpose for which they are intended.

The design of the Works shall be such that installation, future expansions, replacements and general maintenance may be undertaken with a minimum of time and expenses. Each component shall be designed to be consistent with its duty and suitable factors of safety, subject to mutual agreements and shall be used throughout the design. All joints and fastenings shall be devised, constructed and documented so that the component parts shall be accurately positioned and restrained to fulfill their required function. In general screw threads shall be standard metric threads. The use of other thread forms will only be permitted when prior approval has been obtained from purchaser.

Whenever possible, all similar part of the Works shall be made to gauge and shall also be made interchangeable with similar parts. All spare parts shall be interchangeable with, and shall be made of the same materials and workmanship as the corresponding parts of the Equipment supplied under the Specification. Where feasible, common component units shall be employed in different pieces of equipment in order to minimize spare parts stocking requirements. All equipment of the same type and rating shall be physically and electrically interchangeable.

All materials and equipment shall be installed in strict accordance with the manufacturer's recommendation(s). Only first-class work in accordance with the best modern practices will be accepted. Installation shall be constructed as being the erection of equipment at its permanent location. This, unless otherwise specified, shall include unpacking, cleaning and lifting into position, grouting, leveling, aligning, coupling of or bolting down to previously installed equipment bases/foundations, performing the alignment check and final adjustment prior to initial operation, testing and commissioning in accordance with the manufacturer's tolerances and instructions and the Specification. All factory assembled rotating machinery shall be checked for alignment and adjustments made as necessary to re-establish the manufacture's limits suitable guards shall be provided for the protection of personal on all exposed rotating and / or moving machine parts and shall be designed for easy installation and removal for maintenance purpose. The spare equipment(s) shall be installed at designated locations and tested for healthiness.

The Contractor shall apply oil and grease of the proper specification to suit the machinery, as is necessary for the installation of the equipment. Lubricants used for installation purposes shall be drained out and the system flushed through where necessary for applying the lubricant required for operation. The Contractor shall apply all operational lubricants to the equipment installed by him.

All oil, grease and other consumables used in the Works/ Equipment shall be purchased in India unless the Contractor has any special requirement for the specific application of a type of oil or grease not available in India. In such is the case he shall declare in the proposal, where such oil or grease is available. He shall help purchaser in establishing equivalent Indian make and Indian Contractor. The same shall be applicable to other consumables too.

3.3.2 Provisions For Exposure to Hot and Humid climate

Outdoor equipment supplied under the specification shall be suitable for service and storage under tropical conditions of high temperature, high humidity, heavy rainfall and environment favorable to the growth of fungi and mildew. The indoor equipments located in non-air conditioned areas shall also be of same type.

3.4 COLOUR SCHEME AND CODES FOR PIPE SERVICE/PANELS

The contractor shall propose a color scheme for those equipment/Items for which the colour scheme has not been specified in the specification for the approval of purchaser. The decision of purchaser shall be final. The scheme shall include:

Finishing colour of Indoor equipment

Finishing colour of Outdoor equipment.

Finish colour of all cubicles.

Finishing colour of various auxiliary system equipment including piping

Finishing colour of various building items.

Painting process shall be of powder coating type. All surface shall be cleaned , phosphated and given two coats of rust –resistant primer followed by two coats of finish paints . The interior of all panels cabinets and enclosures shall be finished with gloss white enamel. Two final powder coats of synthetic enamel paint of light grey shade (697 of IS-5) shall be given to exterior surface of all the panels. Sufficient quantities of touch paint shall be furnished for application at site. All The indoor cubicles shall be of same colour scheme and for other miscellaneous items, colour scheme will be approved by the purchaser.

3.5 PROTECTION

All coated surfaces shall be protected against abrasion, impact, discoloration and any other damages. All exposed threaded portions shall be suitably protected with either a metallic or a non-metallic protecting device. All ends of all valves, pipings and conduit equipment connections shall be properly sealed with suitable devices to protect them from damage.

All equipment accessories and wiring shall have fungus protection, involving special treatment of insulation and metal against fungus, insects and corrosion. The parts which are likely to get rusted, due to exposure to weather should also be properly treated and protected in a suitable manner. Screens of corrosion resistant material shall be furnished on all ventilating louvers to prevent entry of insects.

3.6 FUNGI STATIC VARNISH

Besides the space heaters, special moisture and fungus resistant varnish shall be applied on the parts, which may be subjected or predisposed to the formation of fungi due to the presence or deposit of nutrient substances. The varnish shall not be applied to any surface of part where the treatment will interface with the operation or performance of the equipment. Such surfaces or parts shall be protected against the application to the varnish.

3.7 SURFACE FINISH

All interiors and exteriors of tanks, control cubicles and other metal parts shall be thoroughly cleaned to remove all rust, scales, corrosion, greases or other adhering foreign matter. All steel surfaces in contact with insulating oil as far as accessible, shall be painted with not less than two coats of heat resistant, oil insoluble, insulating paints.

All metal surfaces exposed to atmosphere shall be given two primer coats of zinc chromate and two coats of epoxy paint with epoxy base thinner. All metal parts not accessible for painting shall be made of corrosion resisting material. All machine finished or bright surfaces shall be coated with a suitable preventive compound and suitably wrapped or otherwise protected. All paints shall be carefully selected to withstand tropical heat and extremes of weather within the limit specified. The paint shall not scale off or wrinkle or be removed by abrasion due to normal handling. All external painting shall be as per shade no. 697 of IS:5.

3.8 GALVANIZING

All ferrous parts including all sizes of nuts, bolts, Plain and spring washers, support channels, structures, shall be hot dip galvanised conforming to latest version of IS:2629 & or 4759 or any other equivalent authoritative standard. However, hardware less than M12 size shall be electro-galvanized. Minimum weight of zinc coating shall be **610 gm/sq.m** and minimum thickness of coating shall be 85 microns for all items thicker than 6mm. For items lower than 6 mm thickness, requirement of coating shall be as per relevant ASTM.

3.9 PACKING

The following details are to be clearly indicated in the material forwarding documents:

- a) Name and address of the consignee.
- b) Purchase order number.
- c) Name of supplier/s.
- d) Description of equipment / material.
- e) Net weight.
- f) Gross weight.

All the equipments shall be suitably protected, coated, covered or boxed and crated to prevent damage or deterioration during transit, handling and storage at Site till the time of erection. On request of the purchaser, the Contractor shall also submit packing details/associated drawing for any equipment material under his scope of supply, to facilitate the purchaser to repack any equipment/ material at a later date, in case the need arises. Any material found short inside the packing cases shall be supplied by the supplier without any extra cost. The cases containing easily damageable material shall be very carefully packed and marked with appropriate caution symbol i.e. fragile, handle with care, use no Hooks etc.

Mandatory spares shall be packed in separate packing with clear identification.

3.10 HANDLING, STORING AND INSTALLATION

Contractor may engage manufacturer's Engineers to supervise if required for unloading, transportation to site, storing, testing and commissioning of the various equipment being procured by them separately. In case of any doubt/misunderstanding as to the correct interpretation of manufacturer's drawings or instructions, necessary clarifications shall be obtained from the purchaser. Contractor shall be held responsible for any damage to the equipment consequent to not following manufacturer's drawings/instructions correctly.

Where assemblies are supplied in more than one section, contractor shall make all necessary mechanical and electrical connections between sections including the connection between buses. Contractor shall also do necessary adjustments/alignments necessary for proper

operation of circuit breakers, isolators and their operating mechanisms. All components shall be protected against damage during unloading, transportation, storage, installation, testing and commissioning.

Contractor shall be responsible for examining all the shipment immediately of any damage, shortage, discrepancy etc. for the purpose of Purchaser's information only. Any demurrage, pilferage and other such charges claimed by the transporters, railways etc. shall be to the account of the Contractor. The Contractor shall be fully responsible, for the equipment/material until the same is handed over to the purchaser in an operating condition after commissioning.

The minimum phase to earth, phase to phase and section clearance along-with other technical parameters for the various switchyard voltage levels to be maintained shall be strictly as per the approved drawings.

The design and workmanship shall be in accordance with the best engineering practices to ensure satisfactory performance throughout the service life. If at any stage during the execution of the Contract, it is observed that the erected equipment(s) do not meet the above minimum clearances, the Contractor shall immediately proceed to correct the discrepancy at his risks and costs.

3.11 QUALITY

BHEL quality plan to be followed subject to TBEM / customer's approval.

3.12 DOCUMENTATION

3.12.1 LIST OF DOCUMENTS

The bidder shall submit a detailed list of drawings / documents along with the bid proposal which he intends to submit to the Employer after award of the contract.

The supplier shall necessarily submit all the drawings / documents unless any thing is waived.

All engineering data submitted by the Contractor after final process including review and approval by the Employer shall form part of the Contract Document and the entire works performed under this specification shall be performed in strict conformity, unless otherwise expressly requested by the Employer in Writing.

3.12.2 DRAWINGS

All drawings submitted by the Contractor including those submitted at the time of bid shall be in sufficient detail to indicate the type, size, arrangement, material description, Bill of Materials, weight of each component, break-up for packing and shipment, the external connections, fixing arrangement required, the dimensions required for installation and interconnections with other equipments and materials, clearances and spaces required for installation and interconnection between various portions of equipments and any other information specifically requested in the specifications.

Each drawing submitted by the Contractor shall be clearly marked with the name of the Employer, name of consultant, the unit designation, contract no. , and the name of the Project

.If standard catalogue pages are submitted, the applicable items shall be indicated therein. All titles, noting, markings and writings on the drawing shall be in English. All the dimensions should be in metric units.

Further work by the Contractor shall be in strict accordance with these drawings and no deviation shall be permitted without the written approval of the Employer if so required.

All manufacturing and fabrication work in connection with the equipment prior to the approval of the drawing shall be at the Contractor's risk. The Contractor may make any changes in the design which are necessary to make the equipment conform to the provisions and intent of the Contract and such changes will again be subject to approval by the Employer. Approval of Contractor's drawing or work by the Employer shall not relieve the contractor of any of his responsibilities and liabilities under the Contract.

3.12.3 APPROVAL PROCEDURE

The scheduled dates for the submission of these as well as for, any data/information to be furnished by the Employer would be discussed and finalised at the time of award. The supplier shall also submit required no. of copies as mentioned in this specification of all drawings/design documents/test reports for approval by the Employer. The following schedule shall be followed generally for approval.

i.	Approval/comments/by employer on Initial submission	Within 2 weeks of receipt
ii.	Resubmission	Within 2 (two) weeks (whenever from date of comments required) Including both ways postal time.
iii.	Approval or comments	Within 2 weeks of receipt of resubmission
iv.	Furnishing of distribution copies	2 weeks from the date of last approval.

Note: The contractor may please note that all resubmissions must incorporate, all comments given in the submission by the Employer failing which the submission of documents is likely to be returned. Every revision shall be a revision number, date and subject, in a revision block provided in the drawing, clearly marking the changes incorporated.

The title block of drawings shall contain the following information incorporated in all contract drawings. Please refer enclosed sheet for details of Title block.

3.12.4 DOCUMENTS TO BE SUBMITTED ALONGWITH OFFER

- 1) Drawings
- 2) Guaranteed Technical Particulars
- 3) Type Test Reports
- 4) Manufacturing Quality Plan

3.12.5 DOCUMENTATION SCHEDULE

S. No.	DESCRIPTION	TENDER STAGE	CONTRACT STAGE FOR APPROVAL	FINAL DOCUMENTATION	
				Prints	CDs
1.	Drawings and Data Sheets	1	6	21	7 nos of all drawings/documents
2.	Drawings "As Built "	-	-	21	
3.	Type Test Reports	1	6	21	
4.	Erection Manuals	-	6	21	
5.	Operation and Maintenance Manuals	-	6	21	
6.	Manufacturing Quality Plan	1	6	21	
7.	Field Quality Plan	1	6	21	
8.	Inspection Test Reports	-	-	21	

Soft copies of drawings at contract stage shall also be submitted in **PDF format**.

Drawings will also be submitted in mini cartridges in AUTOCAD Release -14 package or any other CAD package along with conversion files for all major items.

Final Documentation shall be submitted in bound volumes with Customer & Project etc. written on top.

PROPERTY NO.	BOOK AND PAGE	REV. REG. NO.	COMPUTER FILE NAME
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SECTION - 4

CHECK LIST FOR TESTING EQUIPMENTS

Put a tick mark (√) in 'YES/NO' Column if the specified requirement is met, or put a (X) mark, if the specified requirement is not met and give comments in the "Remarks" column.

S. No.	Parameters	Yes/No	Remarks
1.	Name of testing instrument Note - Please also write make and model of offered equipment's in remarks)		
2.	Name of manufactures & address		
3.	Make and model of offered equipment's as per Annexure-A of section-1		
4.	Following Document to be enclosed		
4.1	Authorized Distributor Certificate from original Manufacturer/OEM		
4.2	After sales service facility in India will be available		
4.3	Undertaking to address issue of warranty / after sales services from OEM		
4.4	Catalogue and data sheet (if any)		
4.5	List of Past supplies in India & abroad		
4.6	List of Deviations if any in Deviation schedule.		
5.	Technical parameter of offered testing equipment's as per section -2 of technical specification		

Note – Check list to be filled for each testing equipment's quoted.

DEVIATION SCHEDULE

SCHEDULE OF TECHNICAL DEVIATIONS

Bidder shall list below all technical deviation clause wise w.r.t. tender specifications:

S.No.	Page No.	Clause No.	Deviation	Reason / Justification
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Any deviation not specifically brought out in this section shall not be admissible for any commercial implication at later stage. Except to the technical deviations listed in this schedule, bidder's offer shall be considered in full compliance to the tender specifications irrespective of any such deviation indicated / taken elsewhere in the submitted offer.

Date:

Tenderer's Stamp & Signature

Estimation for Testing Equipment's for Balaghat (Kirnapur) and Badnawar project of MPPTCL, Dated 23.06.18 , Rev -00

Sl. No.	Item Description	Unit	Total Qty	Unit price (Ex-w in Rs) as per Budgetary offer of M/s Motwane , Dated 18.02.18	Unit price (Ex-w in Rs) as per Budgetary offer of M/s scope , Dated 08.02.18 20.09.17	Unit price (Ex-w in Rs) as per Budgetary offer of M/s Khandela Electronika, Dated 08.02.18 20.09.17	Unit price(Ex-w in Rs) by considering 90% of lowest Budgetary offer	Total Ex-w (Rs)	Remarks
1	500A primary injection kit	Nos.	2	800000		3051350	720000	1440000	
2	5kV insulation tester	Nos.	2	250000		394200	225000	450000	
3	Four pole digital earth tester	Nos.	2			334600	301140	602280	
4	Hand held digital multimeter	Nos.	2	6000		22500	5400	10800	
5	DC earth fault locator	No.	1		43500		39150	39150	
6	Demonstration and training at site of 5kV insulation tester	Lot	2	15000			13500	27000	
7	Demonstration and training at site of Four pole digital earth tester	Lot	2				10000	20000	engineering estimate
							Total	2589230	
							Total Ex-works (Rs) for PI	2589000	

Sardar
23/06/18

CHECKLIST FOR ESTIMATES

Equipment - Testing Equipment's for Balaghat (Kirnapur) and Badnawar project of MPPTCL

PI No.			
PI date			
1	Classification of item		Remarks
1.1	Supply		
1.1.1	Main Item	YES	
1.1.2	Mandatory Spares	NO	
1.1.3	Special Tools & Tackles	NO	
1.2	Services		
1.2.1	Complete Installation	NO	
1.2.2	Supervision of Installation	NO	Training charges at site
1.2.3	Type Test Charges	NO	
1.2	Single Tender (against breakage/theft etc or Only Mandatory spare)	NO	
2	Is the item is being purchased for the first time	NO	
2.1	Is the item is being purchased for the first time, but is being frequently purchased by other sister units. Take reference of POs from sister units	NO	
2.2	Is the item is being purchased for the first time by TBG. Budgetary offer shall be taken and 60-90% of the offer value shall be taken as estimate	NO	
3	If the item is frequently bought by TBG	YES	
3.1	<u>More than one PO to be considered</u> - From last four-five past purchase orders, the aberrations both high or low (with recorded reasons) shall be excluded. From the remaining valid purchase prices, the trend shall be seen and minimum/average shall be considered. POs or their data from the system shall be the basis	NA	90% of budgrary offer has been considered
3.2	<u>Value of previous PO</u> - The magnitude of estimated Total value of PI and the Total value of previous PO should be compared (especially if the previous PO is larger or smaller than 20%)	NA	
3.3	<u>Minor Quantities</u> - For estimating prices of minor quantities on account of separate spares, items against theft / breakage etc shall be adjusted.	NA	
3.4	<u>Vendor List</u> - If the customer is NTPC or POWERGRID or any utility with a limited vendor list	NA	
3.5	<u>Price Variation to take care of time factor</u> - The prices shall be corrected by relevant industry formula for the economic indices for raw material /labour/other input costs/LME price trends/movement in market prices	NA	
3.6	<u>Proprietary Interface</u> - Extension of already supplied item where interface is required e.g. Sub-station Automation System	NA	
3.7	<u>Abnormal change in market</u> - New Vendor entering market, Existing Vendor exiting the market (especially any vendor who was more than 30% of orders). Excessive/Reduced Demand or Excessive/Reduced Supply in market	NA	
3.8	<u>Environment conditions</u> - Any unfavourable environmental conditions (law & order, political instability which can be country specific or site specific).	NA	
3.9	<u>Type Test Charges</u> - It shall be indicated separately. It shall be based on estimate or estimate from Labs. Care shall be taken in taking estimates from previous POs.	NA	
4	Whether estimate of following included		
4.1	Supply Item - Main Item	YES	
4.2	Supply Item - Mandatory Spares	NA	
4.3	Supply Item - Special Tools & Tackles, Instruments	NA	
4.4	Services - Type Test Charges	NA	
4.5	Services - Installation or Supervision of Installation	YES	

Saorvik
23/06/18
Prepared

Checked

Approved