# MAHARASHTRA STATE ELECTRICITY DISTRIBUTION COMPANY LIMITED



# **TENDER DOCUMENT**

Annual tender for the work of Preventive Maintenance of DTC, LT & HT overhead lines & underground cables in Itwari Sub-division under Gandhibag Division of Nagpur Urban Circle.

Tender No. EE/GBDN/T/PM HT LT DTC/Itwari/23-24/T-03 https://works.mahadiscom.in/eTender/etender

> Office of the Executive Engineer, Maharashtra State Electricity Distribution Co. Ltd. Gandhibag Division Dist-Nagpur Pin 440008 Telephone :9607926428 Email:eegandhibag@gmail.com



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# SECTION-I BID INVITATION

#### 1. Introduction

The Maharashtra State Electricity Distribution Company Ltd. (MSEDCL), represented by the Executive Engineer, Gandhibag Division wishes to intend for *Annual tender* 

for the work of Preventive Maintenance of DTC, LT & HT overhead lines & underground cables in Itwari Sub-division under Gandhibag Division of Nagpur Urban Circle for 1 year from the date of issue of work order and as described in the Bidding Data under single point responsibility "Dartial Turn hey Contracts"

Bidding Data under single point responsibility "Partial Turnkey Contracts".

#### 2. Brief description for the Bidding Process:

- a. The Executive Engineer, Gandhibag Division on behalf of MSEDCL, invites eligible bidders to submit a bid in accordance with the provisions of this Tender Document. In this Tender Document, the term "Bidder", which expression shall, unless repugnant to the context, include all parties who have submitted bids in response to this Tender Document within the stipulated time frame for submission.
- b. The Bidders shall submit the bids in two parts by following e-tendering process as described in Bid document. First part comprises of the technical bid and the second part comprises of the Financial/ price bid in accordance with this Tender Document.
- c. Bidder shall not upload Financial/price bid with technical bid documents together. Such bid may be rejected and bidder shall be disqualified from the bidding process.
- d. In terms of the Tender Document, a Bidder will be required to deposit, along with its Bid, a bid security as Earnest Money Deposit (EMD).
- e. MSEDCL will open the technical bids of all bidders and price bids of only technically qualified bidders would be opened.
- f. The Bidder's Names, Bid prices and the presence or absence of the requisite documents and such other details as MSEDCL, at its discretion, may consider appropriate will be announced at the time of opening.

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#### **BIDDING INFORMATION**

| 1 | Tender Reference No.   | EE/GBDN/T/PM HT LT DTC/Itwari/23-<br>24/T-03   |
|---|--|--|
| 2 | Sale of Tender Form on<br>weblink                            | 08/12/2023 to 22/12/2023   |
| 2 | Last date & Time for submission of Bids                      | 22/12/2023 at 13.00 Hrs  |
| 3 | Date of Pre-Bid Meeting                                      | 12/12/2023 at 15.00 Hrs  |
| 4 | Date & Time of opening<br>of Technical Bid                   | 22/12/2023 at 15.00 Hrs  |
| 5 | Address for<br>communication and Venue<br>for Tender opening | eegandhibag@gmail.com<br>Add: Office of the Executive Engineer,<br>Gandhibag Division, Near Chhapru Nagar<br>Square, Beside Ambedkar Garden, CA<br>Road, Nagpur- 440008  |
| 6 | Tender Amount  | Limited to Rs.25.00 Lakhs  |
| 7 | Tender processing fee  | Rs. 2500/- + 18% GST as applicable<br>(Non-refundable & Non Transferable)  |
| 8 | Earnest Money Deposit<br>(EMD)                               | Rs. 25,000/- only (can be paid by either<br>DD in favour of MSEDCL or through RTGS<br>in bank account number 39003329591<br>of State Bank of India, Kingsway road,<br>Main Branch, IFSC Code SBIN0000432 or<br>in the form of Bank Guarantee as per<br>Appendix-IV)  |
| 9 | Performance Bank<br>Guarantee in lieu of<br>Security Deposit | The successful bidder shall furnish<br>the performance Bank guarantee<br>within 14 calendar days from the date<br>of issue of the LOA offer letter in the<br>form of an unconditional and<br>irrevocable Bank Guarantee for an<br>amount of <mark>5% of Contract Value</mark><br>denominated solely in INR payable<br>and claimed at Nagpur issued either<br>by a Nationalized or Scheduled Bank |



| located in Maharashtra and                | located in Maharashtra and valid for |  |
|---|--------------------------------------|--|
| the period for <mark>2 year</mark> from t | ne date of                           |  |
| work order.                               |                                      |  |

# Note:

- 1. The date & time of opening of Price Bid will be informed by an email.
- 2. Eligible bidders shall upload the Bids through e-tender portal of MSEDCL: <u>http://works.mahadiscom.in/eTender/etender</u>details can be obtained from <u>https://www.mahadiscom.in.</u>



# SECTION-II INSTRUCTION TO BIDDERS

The **Executive Engineer, Gandhibag Division**, on behalf of MSEDCL invites bids from eligible bidders for tender along with rates for 1 year.

#### Scope of Contract:

The Scope of contract is as below:

- a) To carry out **Preventive Maintenance of DTC ,LT and HT overhead lines and underground cables in Itwari Sub-division under Gandhibag Division**. Major material required under contracts as per list enclosed (Annexure C) shall be supplied or provided by MSEDCL; and contractor will have to supply minor items of consumable nature only as listed in Annexure D. The rates to be quotated as per the schedule rate mentioned in Annexure E.
- b) In case any major material is not available with MSEDCL the same shall be supplied by the contractor at the prevailing cost data of MESDCL together with price indexing, if applicable.
- c) Detailed execution Plan for timely implementation of work is to be submitted by the contractor immediately after allotment of work.
- d) The selected bidder shall have his Office within the jurisdiction of the works for attending the emergency services. The Agency should keep dedicated teams for Sub-Division/Section having skilled technicians, supervisor & Vehicle for Preventive Maintenance Work.
- e) Bids shall be complete and cover all Works described in the price schedule. Any item of works required for complete usable system shall be deemed to be included in bidder's scope irrespective of whether it is specifically mentioned or not in the price schedules, the same can be brought to notice of Tendering authority during Pre-Bid meeting.
- f) Bidder should note that obtaining permissions from statutory bodies wherever required for execution of works, shall be entirely in bidder's scope. However, MSEDCL will extend its support for obtaining these permissions on best effort basis.
- g) Partial bids, or bids which do not cover the entire scope of the works will be treated as incomplete and "not responsive" to the terms and conditions of bidding and are liable to be rejected.



# 1. Eligibility and qualifying criteria :

The Bidder shall meet following minimum eligibility criteria for participation in the bid.

# (a) Technical Qualification:

- (i) The bidder should have at least 2 years experience as a licensed Electrical contractor in construction, erection, testing, commissioning and maintenance of Distribution Transformer Centre, LT & HT Overhead lines & underground cables.
- (ii) The Bidder should have specific experience of execution of turnkey or partial turnkey contracts during the last 5 years for HT &LT O/H lines or HT&LT U/G cables works – Erection or maintenance of 05 KM of route length of 0.44 kV or higher voltage overhead or underground lines for LT lines and Erection or maintenance of 05 KM of route length of 11 kV or higher voltage overhead or underground lines for HT lines.
- (iii) The Bidder should have specific experience of Erection or maintenance of minimum 05 No(s) of Distribution Transformer Centre (DTC) during the last five years.

All the components of electrical works mentioned above should be in successful operation for at least one (1) year as on date of submission of bid;

- (iv) All the components of electrical works mentioned above should be in successful operation for at least one (1) year as on date of submission of bid;
- (v) Work experiences of the bidder as per above in (ii) shall be considered only if the works have been executed under Govt./semi-Govt./autonomous body of Central/State Govt./Electricity Power Utility/ Public works, Distribution franchisee appointed by MSEDCL and under Dedicated Distribution Facility (DDF) scheme work approved by MSEDCL. The work experience under DDF scheme will be considered only if approved by Competent Authority in MSEDCL i.e. concerned Executive Engineer / Superintending Engineer.



- (vi) The Bidder should deploy sufficient man power for carrying out the maintenance work, however the contractor should provide the manpower at least as mentioned in Annexure-A
- (vii) The Bidder should have required Tool & Plants for these works, minimum requirement for which is as per Annexure-B.
- (viii) The Bidder should have valid GST/PAN Registration Certificate.
- (ix) The Bidder should have valid PF Registration
- (x) The Bidder should have taken Group Insurance Cover for his Employees.

#### (b) Financial Qualification:

- (i) The Bidder should have executed similar works in any sector during the last 5 financial years with minimum
  One work order / contract for equivalent to amount of Rs. 5 Lakhs
  Or
  Two work orders / contracts equivalent to amount of Rs. 3 Lakhs each
  Or
  Three work orders / contracts equivalent to an amount of Rs. 1 Lakhs each.
  (ii) The bidder should have an average annual financial turnover of Rs.25
  Lakhs during last consecutive 3 financial years.
- (iii) The bidder shall have a **positive net worth**.

# 2. Instructions to bidders:

- (i) (a) All bids must be accompanied by EMD as specified in the Tender Notification (Section–I) and uploaded on or before the prescribed date and time given in Section–I of this document. Bids submitted without EMD will be summarily rejected. Bidder shall upload the required documents through electronic mode only as part of their proposal.
  - (b) The Bidder shall also upload copies of
    - (i) Central and State GST registration Certificate
    - (ii) PAN issued by appropriate authority.
    - (iii) Income Tax returns of previous three assessment years.



- (ii) The Bid uploaded by the Bidder and all correspondence and documents in relation to the bid shall be in English Language. For more details refer Clause 6 of this section.
- (iii) Bidders are not allowed to participate in the bid on consortium basis.
- (iv) Bidder should upload only those documents which are asked to be uploaded in the Tender document.
- (v) Technical proposal which are submitted by non qualified bidder or which are evaluated to be "non responsive" will be rejected and shall not be considered for detailed technical evaluation.
- (vi) Only bids conforming to minimum eligibility criteria and found to be technically responsive will be taken up for further evaluation. During evaluation of Bids, MSEDCL, may, at its discretion, ask the bidders for clarification of their proposals.
- (vii) The bidder shall quote their rates considering market and site condition and variation in price index etc. The quoted rates by the bidder shall remain the same.
- (viii) MSEDCL will not entertain any claim at any stage from successful bidder on the plea of not having sufficient acquainted himself as to site condition before submitting price bid etc.
- (ix) Financial bid of the technically qualified bidders to be opened on selected date and the place intimated to technically qualified bidders through email.
- **3.** The Letter of award shall be issued to the L-1 bidder only.
- **4.** The work order are not transferable. Subletting is not allowed.
- 5. MSEDCL reserve rights
  - (a) To reject or accept any or all bids wholly or partly without assigning any reason on the ground considered advantageous to MSEDCL.
  - (b) To decide works to be awarded to empanelled bidders subject to general principle that bidder who has quoted L1 should ordinarily not get less works than others including who matches their price with L1 if there is no deficiency in their work.

#### 6. Language of Bid:



The Bid shall be uploaded in English Language. Supporting documents and printed literature which are in another language shall be accompanied by an accurate translation in the English language duly authenticated and certified by the bidder.

# 7. Documents Comprising the Bid:

The Bid prepared by the Bidder shall be uploaded in 'Two parts viz. Technical Bid and Financial Bid. Bids shall be electronically submitted online in the Etender plat form and the documents shall be scanned and uploaded along with Bid.

#### Part-I: Technical Bid

Bidder shall submit relevant certificates to demonstrate the financial, technical capabilities & eligibility criteria prescribed under this Tender Document. In this regard the Bidder shall upload following minimum documents/ information (form of consent of Lowest matching offer is optional) for technical and financial evaluation.

- i. Firm's Profile at a Glance(Appendix-I(A))
- ii. Financial Status (Appendix-I(B))
- iii. Experience (Appendix-II)
- iv. Form of consent of Lowest matching Offer (Appendix-III)(optional)
   This document is optional. For its use, please refer to clause no 3(x) of instructions to Bidders.
- v. Form of Earnest Money Deposit / Bid Security (Appendix-IV)

#### Part-II: Financial bid

- (i) The bidder shall submit the price schedule as furnished in the tender document. Each entry in the price bid form should be filled.
- (ii) The bidder shall quote the rates for each financial year. Taxes as applicable will be paid extra.
- (iii) Prices shall be quoted in Indian Rupees only.
- (iv) For Technical specifications and Cost Data, Please refer MSEDCL website i.e. <u>https://www.mahadiscom.in/supplier/#</u>.
- (v) Any Financial Bid uploaded with conditions different from the tender specification will be rejected.



# 8. Earnest Money Deposit (E.M.D.):

- a) The Bidder shall furnish along with the Technical Proposal, an E.M.D. of Rs. 25,000/- (Rs. Twenty Five Thousand only). Payable either by DD in favour of MSEDCL or in the form of account transfer through RTGS/NEFT into State Bank of India, Kingsway road, Main Branch Account No. 39003329591 IFSC Code SBIN0000432 or in the form of Bank Guarantee as per Appendix-IV.
- b) Any bid not accompanied by an acceptable E.M.D. shall be rejected by MSEDCL as non-responsive.
- c) The E.M.D. of the successful bidder will be returned when the bidder has signed the Contract Agreement and furnished the required Performance Bank Guarantee.
- d) The E.M.D. of the unsuccessful bidders will be returned as promptly as possible, after finalization of Tender.
  - (i) If a Bidder withdraws his Bid during the period of Bid validity Specified by the Bidder on the Bid Form its E.M.D. will be forfeited.
  - (ii) If the successful Bidder fails to furnish performance security in accordance with Clause 21 of this Section II of this Section, its EMD will be forfeited.

# 9. Period of Validity of Bid:

- a) Bids shall remain valid for 60 days after the date of opening of Technical Bid. A Bid valid for a shorter period shall be rejected by MSEDCL as "nonresponsive".
- b) In some circumstances, MSEDCL may solicit the Bidder's consent to extend the period of validity. The consent for extension, if any, shall be given in writing. The EMD provided under clause (9) of this Section – II above shall also be suitably extended. A Bidder extending the bid validity will not be permitted and modify its original bid.

# **10.** Amendment to Bid document:

a) At any time prior to the deadline for submission of bids, MSEDCL may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, modify the Bid documents by issuing addenda.



 b) Any addendum thus issued shall be treated as part of the Bid documents pursuant to Sub-Clause (a) above and shall be communicated through the website: - http://works.mahadiscom.in/eTender/etender

# 11. Format of Bid

- (i) The bid shall be signed by a person or persons duly authorized to sign on behalf of the bidder. The bidder shall submit declaration to confirm that he has read and accepted all the contents and conditions contained in entire bid document including financial bid containing price proposal.
- (ii) Bidder must give clear page numbers to each page of his offer and a detail index should be provided indicating the page numbers for each relevant document comprising his offer. Checklists for documents and data to be furnished by the Bidders have been given in the Bid document separately for Technical Proposal and Price Proposal. Bidders must fill in these checklists clearly indicating whether corresponding document is submitted or not and if submitted, the relevant page number. If a document is not found at the corresponding page number given in the index, it will be concluded that the said document is not submitted by the Bidder.

# 12. Mode of submission of bids:

- (i) The Bids shall be submitted electronically through the e-tender portal only.
- (ii) Bids sent by any other mode like in person, post, e-mail will not be considered & rejected.
- (iii)MSEDCL may at its discretion require any Bidder to submit the hard copy of any of the document submitted on e-tender platform.

# **13.** Submission of Bids:

The bidder shall scan all the documents forming part of the bidder's Technical Proposal and price proposal, and convert the same into PDF format. The size of the Technical Proposal/Price Proposal in PDF format shall not exceed 5 MB. In case the size of the PDF document exceeds 5 MB, the PDF document shall be split up into suitable number of files of size of 5 MB or less each. There after each file shall be numbered as "Tech\_(Number & Name of Document).pdf". Then these files shall be digitally signed using the software provided by MSEDCL during registration of the bidder. The digitally signed document files shall be uploaded by the bidder on the "e-tendering" web site of MSEDCL.



#### **14.** Deadline for Submission of Bids:

- (i) Bids must be uploaded by the bidder through e-tender process not later than the time and date specified in the invitation for Bids.
- (ii) The MSEDCL may, at the discretion, extend this deadline for submission of bids by issuing an addendum.

#### **15.** Acceptance or Rejection of Bids:

- (i) MSEDCL reserves the right to accept or reject any bid or all the bids and to annul the bidding process and reject all bids at any time prior to award of contract, without thereby incurring any liability or any obligation to inform the affected bidder or bidders of the grounds for the said action.
- (ii) Incomplete bid or Bid with incomplete information/Documents or bid which is not substantially responsive as determined by MSEDCL are liable for rejection.

#### 16. Preliminary Examination of Price Bid:

Upon examination of bid, Arithmetical errors found if any will be rectified on the following basis.

- (i) If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected.
- (ii) If there is a discrepancy between words and figures, the lower of the two will prevail. If the Bidder does not accept the correction of errors, his bid will be rejected.

#### **17.** Opening and Evaluation of Proposals:

#### a) Opening of Pre-Qualification cum Technical Proposals:

- (i) MSEDCL will open the Technical Proposals on the date and time designated in the E-Tender Notice/ Bid Document.
- (ii) The time and date of the opening of the Price Bids will be informed through an email to technically qualified bidders.
- b) Examination of Technical Proposals and Determination of Responsiveness:
  - (i) A technical/ tender committee shall evaluate the Bids submitted by bidders for a detailed scrutiny. During evaluation of Bids, MSEDCL,



may, at its discretion, ask the bidders for clarification of their proposals.

(ii) Notwithstanding the above, MSEDCL reserves the right to accept minor deviations which do not materially affect the substantial responsiveness of the Bid, whose rectification would not affect unfairly the competitive position of other bidders, and which can be rectified after award of contract without change to the price, scope, quality or performance of the Works.

#### c) Clarification of Technical Proposals and Contacting MSEDCL:

- (i) MSEDCL can seek any clarification / document required for technical qualification before opening the Price Bid. The bidder to submit the clarification regarding the documents submitted with the Technical Proposal, same shall be uploaded on the portal or to be submitted by e-mail.
- (ii) Any effort by the bidder to influence MSEDCL in evaluation of Technical Proposals, bid comparison or MSEDCL decisions on acceptance or rejection of bids may result in the rejection of the bidder's bid and forfeiture of the bid security in accordance with the provisions.

#### d) Financial Evaluation:

The "Price bids" of only those bidders shall be opened, who qualifies the "**Prequalification cum Technical Bid**". The price bids of the eligible bidders will then be evaluated in the manner provided below.

- **e)** In case of rate quoted in words and figure are different, the lowest of the two which is beneficial to MSEDCL shall be considered.
- (i) 18. Notification Prior to expiration of the period of bid validity prescribed by MSEDCL, MSEDCL will notify the successful bidder, that his bid has been accepted and his name has been empanelled to carry out *Preventive Maintenance of DTC ,LT & HT overhead lines and underground cables in Itwari Sub Division under Gandhibag Division, for 1 year* on the rates offered by him.
- (ii) This notification of selection will constitute the formation of the Contract. Further, the name of contractors will be hosted on MSEDCL website.



(iii)Upon notification of tender as above MSEDCL will promptly notify the other bidders that their bids have been unsuccessful.

# **18.** Signing of Contract

- (a) Along with notification of finalization of tender, MSEDCL will send the bidder the Form of Contract, incorporating agreement between the parties.
- (b)Within 14 days of receipt of the Letter of Award, the successful bidder shall sign the Form of Contract on Stamp Paper (non-judicial) borne by the bidder as per the rate specified in Bombay Stamp Act 1958 and submit it to MSEDCL as per the format provided separately.
- (c) The incidental expenses of execution of agreement shall be borne by the successful Bidder(s).

(d)

# **19.** Performance Bank Guarantee (PBG) in lieu of Security Deposit:

- a) The successful bidder shall furnish the performance Bank guarantee within 14 calendar days from the issue of the empanelment offer letter in the form of an unconditional and irrevocable Bank Guarantee for an amount of 5% of Contract Value denominated solely in INR payable and claimed at Nagpur issued either by a Nationalized or Scheduled Bank located in Maharashtra and valid for the period for 1 year from the date of empanelment.
- b) The defect liability period of the works including the material shall be 1 year from the month of commissioning which includes free replacement of defective/ non-working/ faulty/ malfunctioning allied materials within Contractual period till completion of guarantee period of 1 year from the date of its commissioning.
- **c) Prior to making a claim under the Performance Bank Guarantee**, MSEDCL or MSEDCL representative shall, in every case, notify the Contractor stating the nature of the default for which the claim is to be made.

# 20. Forfeiture of Performance Bank Guarantee

- (a) **The performance Ba**nk Guarantee submitted in lieu of security deposit specified in the clause 21 will be liable to be forfeited if
  - (i) The contractor fails to initiate the works after issuing of work order or



- (ii) The progress of works lagging behind the desired progress of works as mentioned in work order or
- (iii) The contract is terminated due to the reasons attributed to the contractor or
- (iv) The quality of material is not as per standard or if the works is not carried out as per standard method of construction, or not observing the rules and regulations.
- (b)The performance bank Guarantee shall not be forfeited unless reasonable opportunity of being heard has been given to the party.

# 21. Corrupt or Fraudulent Practices

- a) The Maharashtra State Electricity Distribution Company Ltd. requires that the bidders observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, MSEDCL defines for the purposes of this provision, the terms set forth as below:
  - (i) "corrupt practice" means behaviour on the part of officials in the public or private sectors by which they improperly and unlawfully enrich themselves and/ or those close to them, or induce others to do so, by misusing the position in which they are placed, and it includes the offering, giving, receiving or soliciting of anything of value to influence the action of any such official in the procurement process or in contract execution; and
  - (ii) "fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of MSEDCL, and includes collusive practice among bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive MSEDCL of the benefits of free and open competition.
- b) MSEDCL will reject a proposal for award if it finds out that the bidder recommended for award is engaged in corrupt or fraudulent practices in competing for the contract in question;
- c) MSEDCL will declare a firm ineligible, either indefinitely or for a specific period of time, for award of an MSEDCL contract if at any time if it is found that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing, an MSEDCL Assignment.



# 22. Change in Laws and Regulations

If, after the date seven (07) days prior to the date of Bid Opening, any law, regulation, ordinance, order or by-law having the force of law is enacted, promulgated, abrogated or changed in India (which shall be deemed to include any change in interpretation or application by the competent authorities) that subsequently affects the costs and expenses of the Contractor and/or the Time for Completion, the Contract Price shall be correspondingly increased or decreased, and/or the Time for Completion shall be reasonably adjusted to the extent that the Contractor has thereby been affected in the performance of any of its obligations under the Contract. However, these adjustments would be restricted to direct transactions between MSEDCL and the Contractor and not on procurement of raw materials, intermediary components etc. by the Contractor for which MSEDCL shall be the sole judge. Notwithstanding the foregoing, such additional or reduced costs shall not be separately paid or credited if the same has already been accounted for in the price adjustment provisions where applicable to the **Contract Agreement.** 

#### 25. Process for agencies at division level:

- (i) The detail work order for carrying out the work shall be given by the respective division through ERP only.
- (ii) After completion of work, the contractor should submit the bill through ERP and upload the checklist and photographs in the system.
- (iii) The allotted sub-division to the contractor may be changed at discretion of MSEDCL. The services of the contractor may be utilized by MSEDCL in nearby O&M sub-division within the same division where needed and in nearby divisions during emergencies like major breakdown, flood ,natural calamities with the consent of Agency.
- (iv) The Additional Executive Engineer (Maintenance) will be the Nodal officer and single point communication person for this contract. For all communications please refer e-mail ID given in section-I.



# SECTION – III GENERAL CONDITIONS OF CONTRACT (GCC)

The following are the General Conditions of Contract.

In this Contract, the following terms shall be interpreted as indicated:

# 1. Definitions

In the Contract (as defined below) the words and expressions defined below shall have the meanings assigned to them, except where the context requires otherwise:

- i. **"Commencement Date**" means the date of issue of empanelment order by the concern Superintending Engineer.
- ii. **"Commissioning**" means completion of work & putting the facility/ System in the successful operation. The term "Commissioning" is synonymous with the term "Energization", as commonly used in the Industry.
- iii. "Contract" means the agreement if any to be entered into by MSEDCL with the contractor and shall include these Conditions of Contract, MSEDCL Requirements, the Tender, the Contractor's Proposal, the Schedules, the Letter of Award and such further documents as may be expressly incorporated in the Letter of Award or Contract Agreement (if completed) and any further conditions which may be specifically agreed to between the parties as forming the part of contract.
- iv. **"Contract Period**" means the period from the Commencement Date to the date of completion of empanelment period.
- v. "**Contract Price**" means the sum stated in the Letter of award as payable to the Contractor for the execution, testing, commissioning of the Works and the remedying of any defects in accordance with the provisions of the Contract, including guarantee of the Works and plant during the defects liability period.
- vi. "**Contractor/ Agency**" means the entity supplying the goods and services under this contract.



- vii. "**Contractor's Equipment**" means all machinery, apparatus and other things (other than Temporary Works) required for the execution, completion and guarantee of the Works and the remedying of any defects, but does not include Plant and Equipment, Materials, or other things intended to form or forming part of the Permanent Works.
- viii. "**Contractor's Representative**" means the person (if any) named as such in the Contract or other person appointed from time to time by the Contractor.
  - ix. "Defect" means any part of the Works not completed in accordance with the Specifications and terms and conditions of Contract, including any Works or part thereof which becomes faulty during the Guarantee (Defects Liability) Period.
  - x. "**Defect Correction / Liability Period**" means the period for correction of the Defect by the Contractor, beginning from receipt of the Notice of Defect from MSEDCL by the Contractor and extending up to days thereafter.
  - xi. **"Defect Notice Period**" means the period after observation of the Defect within which MSEDCL should notify the Contractor about the Defect. Notification of the Defect will normally be made immediately after its observation.
- xii. "**Empanelled Contractor**" **means the** person whose Bid has been accepted by MSEDCL and the legal successors in title to such person, but not (except with the consent of MSEDCL) any assignee of such person.
- xiii. "**Employer's Requirements**" means the description of the scope, standards, design criteria (if any) and program of work, as included in the Contract, and any alterations and modifications thereto in accordance with the Contract. The Conditions of Contract, Technical Specifications, Drawings, Appendix to tender and all other information contained in the Bid documents form an integral part of MSEDCL Requirements.
- xiv. "Final Work Completion Certificate" means the certificate issued by MSEDCL Representative upon satisfactory completion of the Guarantee responsibilities.



- xv. "**Guarantee**" means the supply of all things necessary so as to remedy any defects in workmanship, materials, plant and equipment and guarantee proper operation of the constructed facilities for the period of 1 year after completion of the Works, all in accordance with the conditions of the Contract.
- xvi. "Guarantee Period" means the time as stated in the Appendix to Tender for guaranteeing the Plant, Equipment, and Materials against defects in materials, workmanship and manufacturing defects, calculated from the date upon which the entire Works (completion and commissioning of all the useful Sections in all respect) have been completed as certified by MSEDCL Representative. The term "Defects Liability Period" is synonymous with the term "Guarantee Period".
- xvii. "**Inspecting Authority**" shall mean any Engineering person or personnel authorized by MSEDCL to supervise and inspect.
- xviii. "Letter of Empanelment / award" means the formal acceptance by MSEDCL of the tender. The term "Letter of Empanelment / award" is synonymous with the term "Notice of Empanelment / Award".
  - xix. "**Materials**" means things of all kinds (other than Plant) to be provided and incorporated in the Permanent Works by the Contractor, including the supply-only items (if any) which are to be supplied by the Contractor as specified in the Contract.
  - xx. "MSEDCL" means Maharashtra State Electricity Distribution Company Limited; a company incorporated under the Company's Act 1956 after the restructuring of the erstwhile Maharashtra State Electricity Board having its registered office at Plot No. G-9, Prakashgad, Bandra (East), Mumbai 400 051.
  - xxi. "**MSEDCL Representative**" means the person appointed by MSEDCL to act as Representative for the purposes of the Contract and named as specified, or other person appointed from time to time by MSEDCL and notified as such to the Contractor.
- xxii. **"Rate Contracts**": The Rate Contract is a contract under which, during the period of its currency, the contractor engages to supply materials on demand, irrespective of quantity, at fixed



unit rates or prices, within a given period of the receipt of such demand.

- xxiii. "**Site**" means the places provided by MSEDCL where the Works are to be executed at the locations identified and to which Plant/substation and Materials are to be delivered and any other places as may be designated in the Contract as forming part of the Site.
- xxiv. **"Specifications**" mean and include collectively all the terms and stipulations contained in the bid document including the Conditions of Contract, technical provisions and annexure thereto, addenda and lists of corrections, amendments and clarifications, as well as any variations issued by MSEDCL Representative during the course of the Contract.
- xxv. **"Taking-Over Certificate**" means a certificate issued by the Engineer when the Works, have been completed in accordance with the Contract.
- xxvi. "**Works**" means carrying out maintenance as per the instructions received from tender accepting authority/representative of MSEDCL for said works

#### 2. Contract Agreement

A Contract Agreement shall be provided separately.

#### 3. **Priority of Documents**

The documents forming the Contract are to be taken as mutually explanatory of one another. If there is an ambiguity or discrepancy in the documents, MSEDCL shall issue any necessary clarification or instruction to the Contractor, and the priority of the documents shall be as follows:

- i. The Contract Agreement;
- ii. The Letter of Award;
- iii. Work order issued to agencies;
- iv. The Bid (accepted Price Proposal);
- v. The Conditions of Contract, ;
- vi. MSEDCL Requirements (including Specifications and Drawings); and
- vii. The Contractor's Proposal (Technical Proposal, including completed Schedules).



#### 4. Communication with bidder:

- (i) Wherever provision is made for giving or issue of any notice, instruction, consent, approval, certificate or determination by any person, unless otherwise specified such communication shall be in writing and shall not be unreasonably withheld or delayed.
- (ii) Wherever provision is made for a communication to be "written" or "in writing", this means any hand-written, type-written or printed communication.
- (iii) If the Contractor wants to submit any claim, reply to termination notice, any grievance regarding terms & conditions of Contract etc., he should submit the same to the Executive Engineer only, and not any other officers, by hand delivery and obtain the acknowledgement of the same.
- (iv) In case of works related issues such as outages, materials, ROW, works site clearance, line/equipment out permits etc the Contractor should hand over the same to the concern Additional Executive Engineer only, and not any other officers, by hand delivery and obtain the acknowledgment of the same.
- If the Contractor does not get any response from the concern officers, he should send his correspondence to the Chief Engineer (Dist.), Mumbai on his mail id <u>cedist.msedcl@gmail.com</u>.
- (vi) All correspondence, notices or written orders to be given to the Contractor by MSEDCL or MSEDCL Representative, shall be sent by air/ mail on the mail address given by the Contractor in the bidding document.
- (vii) Works review coordination meetings between MSEDCL Representative and Contractor shall be conducted on a monthly basis or as and when required by MSEDCL, at locations decided by MSEDCL, to review the Contractor's progress and plans for completing the remaining Works, to deal with matters affecting the progress of the Works, and to decide on responsibility for actions required to be taken. MSEDCL Representative shall prepare the Minutes of Meeting and provide copies for the records of all attendees. Decisions taken and instructions issued during the coordination meetings, as recorded in the Minutes, shall have the same force and effect as if they were written communications

# 5. Compliance with Statutes, Regulations and Laws



The Contractor shall, in all matters arising in the performance of the Contract, comply with, give all notices under, and pay all fees required by the provisions of any national or state statute, ordinance or other law, or any regulation of any legally constituted public authority having jurisdiction over the Works. The Contractor shall obtain all permits, licenses or approvals required for implementing, testing and commissioning any part of the Works in reasonable time taking account of the times for completion of the Works, and the costs of any such permits, licenses or approvals shall be included in the Contract Price for the relevant Activity. MSEDCL and the Contractor shall comply with the laws of India and the State of Maharashtra.

#### 6. Labour laws

The Contractor shall comply with all the relevant labour laws applying to his employees, and shall duly pay and afford to them all their legal rights. The Contractor shall require all such employees to obey all applicable laws and regulations concerning safety at work. Contractor shall deposit the labour cess as per Building and Other Constructions workers, Welfare Cess Act 1996 to State Government (if applicable) otherwise same shall be deducted from RA (Running Account) bill and shall be deposited to Government Authority.

# 7. Manner of Execution

Execution of work shall be carried out in the approved manner as outlined in the technical specifications or where not outlined, in accordance with relevant BIS/ Indian Standard Specifications, to the reasonable satisfaction of MSEDCL.

- (i) The Contractor should successfully complete the works within time frame set out by MSEDCL. MSEDCL shall not be responsible for any loss or damage of any material when carrying *Preventive Maintenance of DTC, LT & HT overhead lines and underground cables* as per work order.
- (ii) Undertake necessary activities during the guarantee period as set out in this Contract.

#### 8. Standards

The materials / spares supplied under this contract shall confirm to the Standards mentioned in the Technical specification as per the MSEDCL requirements. The material supplied by the Contractor under the contract shall be fully insured by the Contractor in Indian Rupees against any loss or damage incidental to manufacture or acquisition, transportation, storage till handing



over the complete system to the beneficiary and the contract price shall include the same.

#### 9. Transportation on material

- (i) If major materials required for maintenance works is provided by MSEDCL then in such case transportation charges from the Division store to work site and crediting of old/damaged material to Division store at the rate of 1% on cost of material as per prevailing Cost Data will be paid to the Agency through RA bills.
- (ii) If major materials required for maintenance works is provided by the Agency then in such case transportation charges upto work site and crediting of old/damaged material to Division store at the rate of 4% on cost of material as per prevailing Cost Data will be paid to the Agency through RA bills.

#### 10. Insurance on material during transit

The insurance will be paid extra at a rate 1 % on the material cost as per cost data, if material is procured by the Agency.

#### **11.** Payment:

Payment will be made to the Contractor as per Section III, clause no. 20.

#### 12. Sub-contracts:

#### Subcontract is not allowed.

#### **13.** Notice to Correct

If the contractor fails to carry out any of the obligations, or if the Contractor is not executing the works in accordance with the Contract, the MSEDCL may give notice to the contractor requiring him to make good such failure and remedy the same within a specified reasonable time.

#### 14. Removing from empanelment for default:

The Empanelled Agencies have to execute the Preventive Maintenance work as per the Work Order(s) issued by MSEDCL. MSEDCL without prejudice to any other remedy for breach of contract, by written notice of default sent to the Contractor, terminate the contract (empanelment) in whole or part:

(a) In case the contractor defaults on following events on three successive occasions, the contract order is liable for cancellation of tender after issue of termination notice.



- If Agencies do not execute the work allotted to them as per the Work Order issued by MSEDCL or his representative within stipulated time.
- OR
- (ii) If Agencies delays in the execution of the work allotted to them as per the Work order issued by MSEDCL or his representative AND does not efficiently utilize the power shutdown allotted for maintenance work.
- OR
- (iii) If the assets serviced by Agency under this Contract fails/ breaks down within the guarantee period.
- OR
- (iv) If the Agency do not follow statutory rules & regulations related to Safety/ Construction & Maintenance practices / Labour Laws as issued by MSEDCL & other statutory authorities eg. CEA/ Electrical Inspectorate, etc.
- OR
- (v) If the Agency deploy less and/or unskilled manpower than specified under this tender document.
- (b) If found executing the works through subcontractor.
- (c) If contractor fails to replace substandard material or to rectify poor quality of works within 2 weeks from notice given to him.
- (d) If the Contractor/ Agency, in the judgment of MSEDCL has engaged in corrupt or fraudulent practices in competing for or in executing the contract.

# 15. Force Majeure

Notwithstanding the provisions of conditions of contract, the Contractor shall not be liable for Penalty or termination for default, forfeiture of his/ her performance security, if and to the extent that, its delay in performance or other failure to perform its obligations is the result of an event of Force Majeure.

For purposes of this Clause "Force Majeure" means an event beyond the control of the Contractor and not involving the Contractor/ Agencies fault or negligence and not forcible. Such event may include, but are not limited to, acts of MSEDCL either in its sovereign or contractual capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.



If a Force Majeure situation arises, the Contractor shall promptly notify MSEDCL in writing of such conditions and the cause thereof. Unless otherwise directed by MSEDCL in writing, the Contractor shall continue to perform its obligations as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure.

# 16. Debarring the Agencies from business dealing with MSEDCL

In case of failure on part of successful bidder at any stage of tendering and execution, the bidder/ contractor may be debarred as per MSEDCL debar policy provided on MSEDCL website link. (<u>https://www.mahadiscom.in/supplier/wp-content/uploads/2018/06/Final-Booklet-Single-Page.pdf</u>)

# 17. Settlement of Disputes

- (i) All disputes and differences of any kind whatsoever arising out of or in connection with the contract, whether during the progress of the work or after its completion and whether before or after the determination of the contract, shall be referred by the contractor to the Executive Engineer.
- (ii) Three Member Dispute Resolution Committee shall be constituted with one member representing the bidder & the two members of MSEDCL (including one member from Account Department) by concerned Executive Engineer.
- (iii) The Committee shall, within 120 days after receipt of the contractor's representation, make and notify decisions of all matters referred to by the contractor in writing. The decision of Committee will be binding on both parties.

# **18.** Contractor Obligations:

- (i) The Contractor is obliged to work closely with MSEDCL staff, act within its own authority and abide by directives issued by MSEDCL and implementation activities.
- (ii) The Contractor will abide by the job safety measures given on MSEDCL website (<u>https://www.mahadiscom.in/consumer/wp-content/uploads/2018/03/SurakshaDeepSurakshaPustika.pdf</u>) as amended time to time and also statutory directions in this regard and will free MSEDCL from all demands or responsibilities arising from accidents or loss of life the cause of which is the Contractor negligence. The Contractor will pay all indemnities arising from such incidents and will not hold MSEDCL responsible or obligated.



- (iii) The Contractor is responsible for managing the activities of its personnel and will hold itself responsible for any misbehaviour.
- (iv) The Contractor will treat all data and information about MSEDCL, obtained in the execution of his responsibilities, as confidential in strict confidence and will not reveal such information to any other party without the prior written approval of MSEDCL.
- (v) MSEDCL, in no case will be responsible for any accident fatal or nonfatal, caused to any workman or outsider in course of transport or execution of work. All the expenditure including treatment or compensation will be entirely borne by the Contractor. The Contractor shall also be responsible for any claims of the workers including PF, Gratuity, ESI & other legal obligations.
- (vi) The Contractor should provide its employees photo identity cards to be properly displayed during duty hours. No extra payments shall be claimed by the contractor or its deployed staff for such item.
- (vii) The Contractor should carry out *Preventive Maintenance of DTC ,LT* & *HT overhead lines and underground cables in Itwari Sub-division strictly* in accordance with the Terms & Conditions of the contract and without any defects.
  - a. The work relating to maintenance schedule should be executed without any delay as per the implementation schedule mentioned in the work order.
  - b. MSEDCL reserve the right to depute engineer officers from his/ her office for the supervision and inspection at the time of implementation of the contract. The bidder should submit report to the concerned engineer officer regarding the implementation of the contract.
  - c. If any defect is noticed within guarantee period of 1 year after supply, same will have to be replaced by the Contractor at his own expenses. If contractor does not replace or correct it, MSEDCL will get that equipment replaced or corrected from any other contractor/ agency at the cost of the contractor under whose guarantee period equipments are.
  - d. The successful bidder should indicate the name and address of their nearest centre that can take up immediate action on complaint.

#### **19. Implementation schedule and process :**



The work should be implemented by the Contractor as per the following implementation schedule: -

- (i) The work as per schedule given in work order under the empanelment order of *Preventive Maintenance of DTC, LT & HT overhead lines and underground cables in Itwari Sub-division* shall be carried out by Agency and will enter on MSEDCL web portal with photographs of works attended. The Contractor shall carry out the Preventive maintenance immediately from the intimation / by message / mail. The Contractor shall complete the work as per the schedule of works given in the work order and within the outage period.
- (ii) MSEDCL will approve the works attended by agency after due verification & same will be intimated through system for further payment.
- (iii) If Contractor fails to perform the activities within time period from intimation, the Notice to Correct Work shall be issued along with extended time to complete the work and penalty will be levied as per Tender condition.
- (iv) In spite of notice to correct works, if Contractor fails to perform/ improve the progress of the activities, the notice of termination of the work shall be issued.
- (v) Inspite of notice to correct work, work does not get attended in extended time period; MSEDCL will get the work done by some other empanelled agency or any other contractor.
- (vi) The Contractor should take photographs of works carried out along with the contractor representative & MSEDCL local representative and same is to be uploaded in the system.

# 20. Payment and Penalty

# (i) Billing Procedure

- a) The works as per work order shall be carried out by Agency and will be entered on MSEDCL web portal with photographs of works carried out. The contractor should submit online request for JM to concerned Executive engineer, 0 & M division under intimation to Section Engineer.
- b) The concerned Section Engineer should carry out the JM and point out defects if any, to the Contractor preferably within 3 days from the date of request of JM by contractor.



- c) After rectifying defects if any, the contractor will submit Invoice document to the concerned Executive Engineer under intimation to Section Engineer for JMC of rectified work and will upload the same on web portal.
- d) The Sub Divisional officer (O&M) after due scrutiny will clear the JMC and forward to the Executive Engineer within 2 days from the receipt of the JMC.
- e) The Executive Engineer, O&M Division will submit technically scrutinised & audited Invoices to WM Section of Head Office and WM Section will transfer money to the contractor's account within 7 days from the receipt of such invoices from Executive Engineer (O&M).

# (ii) Payment procedure:

The payment will be disbursed against the Bills submitted by the Agency as specified under:

- (a) 100% of the order value for labour component against material supplied by MSEDCL for carrying out *Preventive Maintenance of DTC LT & HT Overhead lines and LT & HT Underground cables in Itwari Sub-division* as per the rates applicable in the yearly rate contract, along with taxes, within 30 days of submission of necessary documents as per check list in duplicate.
- (b) **90%** of the order value of material as supplied by agency/contractor for Supply, Erection, Testing & Commissioning of Line / Cable materials/Substation equipments, within 30 working days, upon submission of necessary documents as per check list in duplicate, after the on-site verification, inspection, by Concerned Sectional Officer/ any authority representative of MSEDCL, for which the claim is received. The balance 10% of payment against supply, installation and commissioning of Line / Cable materials excluding Taxes shall be released on completion of guarantee period.
- (c) In case of repairing of Breaker, the cost of major spares as per the O.E.M. (Original Equipment Manufacturer) rate list will be reimbursed. Payment for the same will be made as per Manufacturer's spares price list.
- (d) The details of all the maintenance works carried out should be fed through mobile-app/ IT system developed by MSEDCL.

# (iii) Penalty for Delay:



- a. The Contractor is required to complete the work within the stipulated time as mentioned in Work Order (i.e. in shutdown) as given by the concern Officer-in-charge. In case the work is not completed within time then the penalty @ Rs.1000/- per hour for every additional hour required for completion work taken shall be charged.
- b. If the contractor fails to provide necessary Spares and Consumables, Tools & Plants and is found working in violation of Safety and other statutory Regulations, penalty of Rs 1,000/- (Rupees One thousand only) per such instance shall be levied, separately.
- c. The Penalty for the delay applicable to activities will not be attributed to the contractor subject to the condition specified in the Section-III, GCC. "Force Majeure" and the mutually agreed genuine causes brought on the records thereof by the contractor.
- d. The delay attributable to MSEDCL will not attract any penalty.

#### (iv) Penalty for non-executed work:

In case the contractor does not execute allotted work as per the hours specified in penalty clause No. 20 (iii) and read with clause No.14 then Work Order may be cancelled and MSEDCL will reserve the right to execute the work from the another contractor at the RISK & COST of the defaulter contractor.



# SECTION - IV FORM AND APPENDIX OF TECHNICAL AND PRICE PROPOSAL

Form of Technical Proposal

(On Bidder's Letterhead)

To,

Maharashtra State Electricity Distribution Company Ltd. Represented by the: Executive Engineer, Maharashtra State Electricity Distribution Co. Ltd., \_\_\_\_\_ Division, Dist. \_\_\_\_\_, Pin \_\_\_\_\_

#### Name of Contract: The Agency for Preventive Maintenance of DTC, LT & HT overhead lines and underground cables in Itwari Sub-division under Gandhibag division of Nagpur Urban Circle.

Sir,

We have understood and checked these documents and have not found any errors in them. We accordingly offer to attend **Preventive Maintenance of DTC**, **LT & HT overhead lines and underground cables in Itwari Sub-division under Gandhibag division of Nagpur Urban Circle** with guarantee period of 1 Year, (hereinafter referred to as the contract of works) and as described in the Bid document "Partial Turnkey Contracts" as well as remedy any defects and guarantee the entire completed facilities against any defects in materials, workmanship and equipment for period specified in Bid Documents, after completion, fit for its purpose in conformity with these documents and the enclosed Proposal.

We hereby declare that we accept all the terms, conditions, specifications and all other matters set forth in sections and agree that these will form a part of the Contract if we are selected for award of empanelment.

We have submitted price bids for Tender No. \_\_\_. We have submitted complete details of our technical and financial capabilities for establishing our eligibility to undertake works on all these tenders. However we hereby confirm that we accept that the MSEDCL decision on our eligibility to undertake the works in accordance with the requirements set out in the Invitation for Bids will be final and binding on us, and that we will not raise any objection should MSEDCL decide to reject our Bid for this tender on the grounds that we do not satisfactorily meet the minimum qualifying criteria.



This Bid and your written acceptance shall be the basis for Contract Agreement. We understand that you are not bound to accept the lowest or any bid you receive or assign any reason thereof for the rejection.

We agree to keep this bid open for acceptance for a period of 60 days from the date of opening thereof and also agree not to make any modification in the terms and conditions on our own accord. We further agree to sign an Agreement to abide by the Conditions of Contract and carry out all works according to specific clauses and work order.

We accept that Dispute Resolution procedures, General Conditions of Contract, will be used for settling any disputes that cannot be mutually agreed with MSEDCL.

Yours faithfully,

Signature & Seal of company,

in the capacity of duly authorized to sign bids for and on behalf of

Address:

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# **CHECK LIST OF DOCUMENTS ENCLOSED**

| Sr.<br>No. | Name of Documents Attached  | Remark<br>(Tick Yes if enclosed<br>or Tick No if not<br>enclosed) |    |
|------------|---|---|----|
| 1.         | Firm's Profile at a Glance Appendix–I(A)  | Yes   | No |
| 2.         | Financial Status Appendix–I(B)  | Yes   | No |
| 3.         | Self-Certification of No Bar/ non-failure/<br>blacklisted                       | Yes   | No |
| 4.         | Experience for maintenance, supply and commissioning Appendix-II                | Yes   | No |
| 5.         | Form of Consent for Lowest Matching Offer<br>Appendix-III (optional)            | Yes   | No |
| 6.         | Form of Earnest Money Deposit / Bid Security<br>Appendix-IV                     | Yes   | No |
| 7.         | Power of attorney in the name of the person authorized to sign Bid document     | Yes   | No |
| 8.         | Receipt of Payment made by the bidder against the Bid Fees                      | Yes   | No |
| 9.         | Tender Document signed by bidder on each page along with Price Schedule Format. | Yes   | No |
| 10.        | Form of Technical Proposal  | Yes   | No |

Bidder's Signature: (Seal)



# Form of Price Proposal and Appendix to Price Proposal (to be submitted along with Price Schedule)

#### FORM OF PRICE PROPOSAL

(On Bidder's Letter head)

To,

Maharashtra State Electricity Distribution Company Ltd. Represented by the: Executive Engineer, Maharashtra State Electricity Distribution Co. Ltd., \_\_\_\_\_ Division, Dist. \_\_\_\_\_, Pin \_\_\_\_\_

## Name of Contract: **Preventive Maintenance of DTC**, **LT & HT overhead lines and** underground cables in Itwari Sub-division under Gandhibag division of Nagpur Urban Circle.

Sir,

We have understood and checked these documents and have not found any errors in them. We accordingly offer to execute and complete and guarantee the said Works and remedy any defects, fit for its purpose in conformity with these documents and work order to be issued when we get empanelled and the enclosed proposal, for the rate as per Price Schedule exclusive of all the GST in accordance with the terms and conditions of the Contract. The above amounts are in accordance with the Price Schedules herewith enclosed which form a part of this bid.

We agree to abide by this Bid for the period of 60 days after the date of opening of the Technical Proposal, and it shall remain binding upon us and may be accepted at any time before that date. We acknowledge that the Appendix to Price Proposal and Appendix to Technical Proposal form part of our Bid.

If our Bid is accepted, we will provide the specified Security Deposit / PBG. We will commence the Works as soon as possible after receiving the Work Order after our empanelment, and complete the Works in accordance with the above document and Work Order within time.

Unless and until a formal Agreement is prepared and executed, this Bid, together with your written acceptance thereof, shall constitute a binding contract between us.

Yours faithfully

Signature

Seal in the capacity duly authorized to sign bids for and on behalf of



# **APPENDIX TO PRICE PROPOSAL**

| Description   | Tender No. EE/GBDN/T/PM HT LT DTC/Itwari/23-24/T-03  |
|---|--|
| Employer's Name<br>and Address                      | Maharashtra State Electricity Distribution Co. Ltd.<br>Represented by the:<br>Executive Engineer,<br>Maharashtra State Electricity Distribution Co. Ltd.             |
| Contractor's Name<br>and Address                    | (To be completed by the Bidder before the Bid is submitted)  |
| Name and Address<br>of the MSEDCL<br>Representative | Shri. S. S. Hoge, Add. Executive Engineer, (Maint), MSEDCL,<br>Gandhibag Division. Add: Near Chhapru Nagar Square, Beside<br>Ambedkar Garden, CA Road, Nagpur-440008 |

#### **CHECK LIST OF DOCUMENTS ENCLOSED**

| Sr.<br>No. | Name of Documents Attached                          | Remark |    |
|------------|---|--------|----|
| 1.         | Form of Price Proposal & Appendix to Price Proposal | Yes    | No |
| 2.         | Price Schedule                                      | Yes    | No |

Signature of Bidder:

.....,

# APPENDIX- I (A) FIRM PROFILE AT A GLANCE

| Sr. No.  | Particulars                              | Details |
|--|--|---------|
| 1  | Name & Mailing Address of firm           |         |
| 2  | Contact Person Name, Designation &       |         |
|  | Contact No.                              |         |
| 3  | E-mail Address for correspondence        |         |
| 4  | Firm Website Address                     |         |
| 5  | Firm Status (Private/ Proprietor)        |         |
| 6  | PAN/ TAN No.                             |         |
| 7  | Bidder's UIN No. (Unique                 |         |
| /  | Identification Number)                   |         |
| 8  | Firm Registration No                     |         |
| 9  | Bidder's registration certificates for   |         |
| 9  | GST                                      |         |
| 10   | Bidder's registration certificates under |         |
|  | the applicable PF and labour laws.       |         |
| Attached are copies of the necessary original documents. |  |         |
| 1.   |  |         |
| 2.   |  |         |
| 3.   |  |         |
| 4.   |  |         |
| 5.   |  |         |

It is certified that the information provided above is true to the best of my knowledge and belief. If any information found to be concealed, suppressed or found incorrect at later date, our tender shall be liable to be rejected and our company may be debarred from executing any business with MSEDCL as per MSEDCL debar policy.

Signature of Bidder

Name

Designation

#### Date:



## APPENDIX- I (B) FINANCIAL STATUS

| Each Bidder must f | ill in this form | n including priv | vate/ public limite | ed company.                           |
|--------------------|------------------|------------------|---------------------|---------------------------------------|
|                    |                  |                  |                     | · · · · · · · · · · · · · · · · · · · |

| Sr.<br>No. | Particulars   | Financial Data for Previous<br>Years [Rs. in Lacs] |         |         |
|------------|---|--|---------|---------|
| INU.       |   | 2020-21  | 2021-22 | 2022-23 |
| 1          | Total Assets  |  |         |         |
| 2          | Current Assets  |  |         |         |
| 3          | Total Liabilities   |  |         |         |
| 4          | Long Term Loans   |  |         |         |
| 5          | Current Liabilities   |  |         |         |
| 6          | Profits Before Taxes  |  |         |         |
| 7          | Profits After Taxes   |  |         |         |
| 8          | Net Worth   |  |         |         |
| 9          | Available Working Capital   |  |         |         |
| 10         | Annual Turnover   |  |         |         |
|            | Attached are copies of the audited bat<br>notes, and income statements for the<br>2021-22 & 2022-23 |  | e       |         |

Applicant's Auditor



## APPENDIX- II EXPERIENCE

| Sr. | Noture of Morie | Year wise order amount of<br>works in Lakhs |         |         | Experience<br>certificate |
|-----|-----------------|---|---------|---------|---------------------------|
| No. | Nature of Work  | 2020-21                                     | 2021-22 | 2022-23 | attached at<br>page No    |
|     |                 |   |         |         |                           |
|     |                 |   |         |         |                           |
|     |                 |   |         |         |                           |
|     |                 |   |         |         |                           |
|     |                 |   |         |         |                           |
|     |                 |   |         |         |                           |
|     |                 |   |         |         |                           |
|     |                 |   |         |         |                           |
|     |                 |   |         |         |                           |
|     |                 |   |         |         |                           |
|     |                 |   |         |         |                           |
|     |                 |   |         |         |                           |
|     |                 |   |         |         |                           |

- Signature of Bidder
- Name
- Designation
- Company
- Date



### APPENDIX- IV FORM OF EARNEST MONEY DEPOSIT/ BID SECURITY (BANK GUARANTEE)

WHEREAS, \_\_\_\_\_\_ [Name of Bidder] (hereinafter called "the Bidder") has submitted his bid dated \_\_\_\_\_\_, for Empanelment of Contractors for Preventive Maintenance of DTC, LT & HT overhead lines and underground cables in Itwari Sub-division under Gandhibag Division of Nagpur Urban Circle with guarantee period of 1 Year for materials from the date of its commissioning and as described in the Bidding Data in MSEDCL under "Partial Turnkey Contracts" basis under bid package number Bid No: (hereinafter called "the Bid") for works of Preventive Maintenance of DTC , LT & HT overhead lines and underground cables in Itwari Sub-division under Gandhibag Division of Nagpur Urban Circle.

Know all people by these presents that We \_\_\_\_\_ [Name of Bank] of having our registered office at \_\_\_\_\_\_ (hereinafter called "the Bank") are bound unto the Maharashtra State Electricity Distribution Company Limited in the sum of (Rupees Rs. \_ only) for which payment well and truly to be made to the MSEDCL. The Bank binds himself, its successors and assigns by these guarantee will be payable presents. This at our branch office at \_\_\_\_\_ [Address of branch office], sealed with the Common Seal of the said Bank this \_\_\_\_\_ day of \_\_\_\_\_.

The conditions of this obligation are:

- 1) If the Bidder withdraws his Bid during the period of Bid validity specified in the Form of Bid; or
- 2) If the Bidder refuses to accept the correction of errors in his Bid; or
- 3) If the Bidder is determined at any time prior to award of contract to have engaged in corrupt or fraudulent practices in competing for the contract; or
- 4) If the Bidder, having been notified of the acceptance of his Bid by MSEDCL during the period of Bid validity:
  - a. fails or refuses to execute the Form of Contract Agreement in accordance with the Instructions to Bidders, if required; or
  - b. fails or refuses to furnish the Security deposit, in accordance with the Instructions to Bidders;



We undertake to pay to MSEDCL the above amount upon receipt of its first written demand, without MSEDCL having to substantiate his demand, provided that in its demand MSEDCL will note that the amount claimed by him is due to him owing to the occurrence of one or all of the above conditions.

This Guarantee will remain in force up to **60 days** after the date of opening of Technical Bid as such deadline is stated in the Instructions to Bidders or as it may be extended by MSEDCL, notice of which extension(s) to the Bank is hereby waived. Any demand in respect of this Guarantee should reach the Bank not later than the above date.

Date

Signature of Bank's authorized officer

Seal

Signature of Bank's Second authorized officer

Seal



**ANNEXURE-A** 

#### LIST OF MANPOWER ESSENTIAL FOR TECHNICAL QUALIFICATION

| Sr.no | Designation                | Manpower | Work  | Education<br>Qualification and<br>experienced   |
|-------|----------------------------|----------|---|---|
| 1     | Supervisor                 | 1 Nos.   | Supervision &<br>Coordination<br>with MSEDCL<br>Engineer-in-<br>charge.   | ITI electrician having<br>supervisor licence with<br>05 years practical<br>experience in<br>Substation / HT / LT<br>line work. However<br>agencies having<br>Supervisor with<br>Degree/Diploma in<br>Electrical Engineering<br>will be preferred. |
| 2     | Electrician/<br>Technician | 2 Nos.   | Carrying out<br>Preventive &<br>Breakdown<br>Maintenance<br>work  | ITI Trade in Electrical<br>with 05 years practical<br>experience in<br>Operation &<br>Maintenance of<br>HT/LT/substation<br>equipment(s)  |
| 3     | Helper                     | 4 Nos.   | Assistance to<br>Technicians/<br>Electrician/ Cable<br>Jointer for<br>Carrying out<br>Preventive<br>Maintenance<br>work | 10th Class Pass with 03<br>years experience and<br>basic Knowledge of<br>Electrical Equipments<br>and wiring.   |
| 4     | Unskilled<br>Labour        | 2 Nos.   | Assistance<br>substation work   | Having experience in HT/LT/substation work .  |

#### **ANNEXURE-B**

## LIST OF TOOLS AND PLANTS (T&P) ESSENTIAL FOR TECHNICAL QUALIFICATION

| Sr.No. | Name of Tools and Plants  | No.(s)    |
|--------|---|-----------|
| 1      | Insulation Tester. (Megger) (500-5000 V)  | 01        |
| 2      | Earth Insulation Tester with suitable probes.   |           |
| 3      | Multi-meter (digital)   | 01        |
| 4      | Portable AC current injection set - Low voltage (0 to 40V, 0-100 amp)                                   | 01        |
| 5      | Set of flexible wires of suitable current rating and connector clips                                    | 01        |
| 6      | Clamp On meter (Tong Tester)  | 01        |
| 7      | Oil BDV Tester set  | 01        |
| 8      | Screw Driver set- 6"-12", Transparent Insulated Green Head,<br>Non sparking type with insulated blades. | 02        |
| 9      | Hammer- Cross/Ball Pin with wooden handle,<br>200gm/500gm/800gm   | 03        |
| 10     | Pliers- Combination pliers 150/160/170mm  | 03        |
| 11     | Nose Pliers   | 02        |
| 12     | Hacksaw   | 02        |
| 13     | spanner set   | 02        |
| 14     | Ratchet Set   | 01        |
| 15     | Chain Pulleys   | 01        |
| 16     | Fibre Ladders of suitable sizes   | 01        |
| 17     | Crimping Tools  | 01        |
| 18     | Air Blower  | 01        |
| 19     | Vacuum Cleaner  | 01        |
| 20     | Tap kit with handles  | 01        |
| 21     | Vehicle for transportation-LMV  | 01        |
| 22     | Discharge Rod (Earthing Rod) HT & LT  | 02 (Each) |
| 23     | Hand Gloves   | 2 Pairs   |



Maharashtra State Electricity Distribution Company Limited

| 24 | Safety Shoes  | 2 Pairs |
|----|---------------|---------|
| 25 | Safety Zoola  | 02      |
| 26 | Safety Helmet | 05      |



#### LIST OF MAJOR MATERIAL

(To be provided by MSEDCL. If not provided by MSEDCL, contractor to procure and use. The cost of such material procured by Contractor shall be reimbursed as per prevailing cost data of MSEDCL along with price variation (PV))

| Sr No | Description of Material                                 |
|-------|---|
| 1     | All Aluminium Alloy Conductor 34 sq.mm.                 |
| 2     | All Aluminium Alloy Conductor 55 sq.mm.                 |
| 3     | R.S.J. Poles 175 x 85 mm - 9 Mtr.                       |
| 4     | R.S.J. Poles 125 x 70 mm - 8 Mtr.                       |
| 5     | L.T. PVC Armoured cable 2C 16 Sq.mm                     |
| 6     | L.T. PVC Armoured cable 4C 16 sq.mm.                    |
| 7     | L.T. PVC Armoured cable 3.5C 35 sq.mm.                  |
| 8     | L.T. PVC Armoured cable 3 1/2 C 50 sq.mm.               |
| 9     | L.T. XLPE Armoured cable 3.5C X 70 sq.mm.               |
| 10    | L.T. XLPE Armoured cable 3.5C X 120 sq.mm.              |
| 11    | L.T. XLPE Armoured cable 3.5C X 185 sq.mm.              |
| 12    | L.T. XLPE Armoured cable 3.5C X 300 sq.mm.              |
| 13    | L.T. XLPE Un armoured cable 1C X 50 sq.mm.              |
| 14    | L.T. XLPE Un armoured cable 1C X 70 sq.mm.              |
| 15    | L.T. Dist. Box 315 KVA with MCCB / Kitkat               |
| 16    | W.P. Wire 1.5 mm2 T/C 1100 V Grade                      |
| 17    | W.P. Wire 2.5 mm2 T/C 1100 V Grade                      |
| 18    | W.P. Wire 4 mm2 T/C 1100 V Grade                        |
| 19    | W.P. Wire 10 mm2 T/C 1100 V Grade                       |
| 20    | L.T. XLPE Aerial Bunched cable 3 X 50 + 16 + 35 sq.mm.  |
| 21    | L.T. XLPE Aerial Bunched cable 3 X 70 + 16 + 50 sq.mm.  |
| 22    | L.T. XLPE Aerial Bunched cable 3 X 120 + 16 + 70 sq.mm. |
| 23    | 8 way feeder pillar with ACB                            |
| 24    | 6 way feeder pillar with ACB                            |
| 25    | L.T. Mini Feeder Pillar                                 |
| 26    | LT Feeder Pillar 2/3 Way                                |
| 27    | L.T. Feeder Pillar 4 Way                                |
| 28    | LT Feeder Pillar 6 Way                                  |
| 29    | LT Feeder Pillar 8 Way                                  |
| 30    | PSC pole 8 mtr 200 Kg Pole                              |



| 31 | PSC pole 8 mtr 140 Kg Pole                            |
|----|---|
| 32 | GI wire 10 SWG  |
| 33 | GI wire 8 SWG   |
| 34 | Stay wire   |
| 35 | Stay insulator  |
| 36 | Shackle insulators                                    |
| 37 | Single Phase Distribution Box 15/25 KVA               |
| 38 | AC Distribution Board 'B' type                        |
| 39 | L.T. Straight Through Joint Kit for 4C 16 sq.mm.      |
| 40 | L.T. Straight Through Joint Kit for 3 1/2C 35 sq.mm.  |
| 41 | L.T. Straight Through Joint Kit for 3 1/2C 50 sq.mm.  |
| 42 | L.T. Straight Through Joint Kit for 3 1/2C 70 sq.mm.  |
| 43 | L.T. Straight Through Joint Kit for 3 1/2C 95 sq.mm.  |
| 44 | L.T. Straight Through Joint Kit for 3 1/2C 120 sq.mm. |
| 45 | L.T. Straight Through Joint Kit for 3 1/2C 185 sq.mm. |
| 46 | L.T. Straight Through Joint Kit for 3 1/2C 240 sq.mm. |
| 47 | L.T. Straight Through Joint Kit for 3 1/2C 300 sq.mm. |
| 48 | Any other material requirement                        |

#### LIST OF MAJOR MATERIAL for HT OH & UG lines

(To be provided by MSEDCL. If not provided by MSEDCL, contractor to procure and use. The cost of such material procured by Contractor shall be reimbursed as per prevailing cost data of MSEDCL along with price variation(PV))

| Sr No | Description of Material                  |
|-------|--|
| 1     | All Aluminium Alloy Conductor 34 sq.mm.  |
| 2     | All Aluminium Alloy Conductor 55 sq.mm.  |
| 3     | All Aluminium Alloy Conductor 100 sq.mm. |
| 4     | XLPE Cable 11 kV 3C 95 sq.mm.            |
| 5     | XLPE Cable 11 kV 3C 185 sq.mm.           |
| 6     | XLPE Cable 11 kV 3C 240 sq.mm.           |
| 7     | XLPE Cable 11 kV 3C 300 sq.mm.           |
| 8     | XLPE Cable 22 kV 3C 95 sq.mm.            |
| 9     | XLPE Cable 22 kV 3C185 sq.mm.            |
| 10    | XLPE Cable 22 kV 3C 300 sq.mm.           |
| 11    | XLPE Cable 33 kV 3C 300 sq.mm.           |



| 12 | R.S.J. Poles 100 x 116 mm - 10 Mtr.                     |
|----|---|
| 13 | R.S.J. Poles 175 x 85 mm - 9 Mtr.                       |
| 14 | R.S.J. Poles 125 x 70 mm - 8 Mtr.                       |
| 15 | R.S.J. Poles 152 x 152 mm - (13.00 Mtr.)                |
| 16 | R.S.J. Poles 152 x 152 mm - (11.00 Mtr.)                |
| 17 | G.I. Stay Wire 7/8 SWG                                  |
| 18 | G.I. Stay wire 7/10 SWG                                 |
| 19 | G.I. Wire 8 SWG   |
| 20 | G.I. Wire 10 SWG  |
| 21 | G.I. Wire 6 SWG   |
| 22 | 11 kV A.B. Switch                                       |
| 23 | 22 kV A.B. Switch                                       |
| 24 | 11 kV Horn Gap fuse unit                                |
| 25 | 22 kV Horn Gap fuse unit                                |
| 26 | 11 kV Pin Insulator                                     |
| 27 | 22 kV Pin Insulator                                     |
| 28 | 33 kV Pin Insulator                                     |
| 29 | Disc Insulator 11 kV 45 KN                              |
| 30 | Disc Insulator 11 kV 70 KN                              |
| 31 | HT Pillar 22 KV   |
| 32 | 11 KV Feedar Pillar 2 Way                               |
| 33 | 11 KV Feeder Pillar 4 Way                               |
| 34 | 11 kV SF6, Motorized, SCADA Compatible RMU 1 Iso + 1 Br |
| 35 | 11 kV SF6, Motorized, SCADA Compatible RMU 1 Iso + 2 Br |
| 36 | 11 kV SF6, Motorized, SCADA Compatible RMU 2 Iso + 1 Br |
| 37 | 11 kV SF6, Motorized, SCADA Compatible RMU 2 Iso + 2 Br |
| 38 | 11 kV SF6, Motorized, SCADA Compatible RMU 2 Iso + 3 Br |
| 39 | 11 kV SF6, Motorized, SCADA Compatible RMU 2 Iso + 4 Br |
| 40 | 11 kV SF6, Motorized, SCADA Compatible RMU 3 Iso + 2 Br |
| 41 | 11 kV SF6, Motorized, SCADA Compatible RMU 3 Iso + 1 Br |
| 42 | 22 kV SF6, Motorized, SCADA Compatible RMU 1 Iso + 1 Br |
| 43 | 22 kV SF6, Motorized, SCADA Compatible RMU 1 Iso + 2 Br |
| 44 | 22 kV SF6, Motorized, SCADA Compatible RMU 2 Iso + 1 Br |
| 45 | 22 kV SF6, Motorized, SCADA Compatible RMU 2 Iso + 2 Br |
| 46 | 22 kV SF6, Motorized, SCADA Compatible RMU 2 Iso + 3 Br |
| 47 | 22 kV SF6, Motorized, SCADA Compatible RMU 2 Iso + 4 Br |
| 48 | 22 kV SF6, Motorized, SCADA Compatible RMU 3 Iso + 2 Br |
|    |   |



| 49 | 33 kV End Termination for 3C 300 sqmm cable                   |
|----|---|
| 50 | 33 kV End Termination for 3C 95 sqmm cable                    |
| 51 | 22 kV End Termination for 3C 300 sqmm cable                   |
| 52 | 22 kV End Termination for 3C 240 sqmm cable                   |
| 53 | 22 kV End Termination for 3C 180 sqmm cable                   |
| 54 | 22 kV End Termination for 3C 95 sqmm cable                    |
| 55 | 11 kV End Termination for 3C 300 sqmm cable                   |
| 56 | 11 kV End Termination for 3C 240 sqmm cable                   |
| 57 | 11 kV End Termination for 3C 180 sqmm cable                   |
| 58 | 11 kV End Termination for 3C 95 sqmm cable                    |
| 59 | 33 kV Straight Through Joint Kit for 3C / 300 sqmm XLPE cable |
| 60 | 22 kV Straight Through Joint Kit for 3C / 300 sqmm XLPE cable |
| 61 | 22 kV Straight Through Joint Kit for 3C / 240 sqmm XLPE cable |
| 62 | 22 kV Straight Through Joint Kit for 3C / 185 sqmm XLPE cable |
| 63 | 11 kV Straight Through Joint Kit for 3C / 300 sqmm XLPE cable |
| 64 | 11 kV Straight Through Joint Kit for 3C / 240 sqmm XLPE cable |
| 65 | 11 kV Straight Through Joint Kit for 3C / 185 sqmm XLPE cable |
| 66 | Any other material requirement                                |

Note

1. Reinstatement of road to original after excavation during cable fault or laying of cable as per MoU route with GoM. Pl. refer circular no. CE/IPDS/4244 Dtd. 27.02.2018.

#### LIST OF MAJOR MATERIAL for DTC

(To be provided by MSEDCL. If not provided by MSEDCL, contractor to procure and use in such instances, the cost of such material procured by Contractor shall be reimbursed as per prevailing cost data of MSEDCL along with price variation (PV) if any)

| Sr No | Description of Material                |
|-------|--|
| 1     | Dist.Transformer 11/0.43 KV, 63 kVA    |
| 2     | Dist.Transformer 11/0.433 kV,100 kVA   |
| 3     | Dist.Transformer 11/0.43 KV OD 200 KVA |
| 4     | Dist.Transformer 11/0.43 KV OD 315 KVA |



| 5  | Dist.Transformer 11/0.43 kV ID 315 KVA    |  |  |  |  |  |  |  |
|----|---|--|--|--|--|--|--|--|
| 6  | Dist.Transformer 11/0.43 kV ID 630 KVA    |  |  |  |  |  |  |  |
| 7  | Dist.Transformer 11/0.43 KV OD 630 KVA    |  |  |  |  |  |  |  |
| 8  | Dist.Transformer 22/0.43 KV 63 KVA        |  |  |  |  |  |  |  |
| 9  | Dist.Transformer 22/0.43 KV 100 KVA       |  |  |  |  |  |  |  |
| 10 | Dist.Transformer 22/0.4 kV OD 200 KVA     |  |  |  |  |  |  |  |
| 11 | Dist.Transformer 22/0.4 kV OD 315 KVA     |  |  |  |  |  |  |  |
| 12 | Dist.Transformer 22/0.4 kV ID 630 KVA     |  |  |  |  |  |  |  |
| 13 | Dist.Transformer 22/0.4 kV OD 630 KVA     |  |  |  |  |  |  |  |
| 14 | Dist.Transformer Single Phase 16 KVA      |  |  |  |  |  |  |  |
| 15 | L.T.Dist.Boxes 25/63 KVA with MCCB        |  |  |  |  |  |  |  |
| 16 | L.T.Dist.Boxes 25/63 KVA with KITKAT      |  |  |  |  |  |  |  |
| 17 | L.T.Dist.Boxes 100 KVA with MCCB          |  |  |  |  |  |  |  |
| 18 | L.T.Dist.Boxes 100 KVA with KITKAT        |  |  |  |  |  |  |  |
| 19 | L.T.Dist.Boxes 200 KVA with MCCB          |  |  |  |  |  |  |  |
| 20 | L.T.Dist.Boxes 200 KVA with KitKat        |  |  |  |  |  |  |  |
| 21 | Single Core armoured XLPE Cable 300 sq.mm |  |  |  |  |  |  |  |
| 22 | Single Core armoured XLPE Cable 240 sq.mm |  |  |  |  |  |  |  |
| 23 | Any other material requirement            |  |  |  |  |  |  |  |



**ANNEXURE-D** 

# LIST OF MINOR AND CONSUMABLE MATERIAL (which shall be used by Bidder from his own resources without any extra cost.)

| Sr. No. | Particular                       |
|---------|----------------------------------|
| 1       | CRC (Electrical contact cleaner) |
| 2       | M-Seal                           |
| 3       | PVC Tape                         |
| 4       | Cotton waste                     |
| 5       | Cloths                           |
| 6       | Nut Bolt of various sizes        |
| 7       | Grease / jelly                   |
| 8       | Flexible cables / control cables |
| 9       | Hand wire brush                  |
| 10      | Spray Bottles                    |
| 11      | HT tape                          |
| 12      | Lugs of various sizes            |
| 13      | Ferrules of various sizes        |
| 14      | Anti tracking spray              |



#### ACTIVITIES TO BE DONE FOR PREVENTIVE MAINTENANCE SCHEDULE "A"

| Overhead Lines LT   |
|---|
| (i) Trimming of Tree Branches near to LT lines                                |
| (ii) Checking of Loose Jumpers  |
| (iii) Checking & tightening of earthing                                       |
| (iv) Stringing & Tightening of loose span                                     |
| (v) Checking & replacement of Damaged Shackle Insulator                       |
| (vi) Checking & tightening of loose fabrications                              |
| (vii) Checking & tightening of Loose Guarding                                 |
| (viii) Tightening of loose stay wire with stay insulator                      |
| (ix) Checking of lines clearance safety point of view (Horizontal & Vertical) |
| (x) Providing spacers if distance between phases are less                     |
| (xi) Identification & rectification of accident prone location                |
| (xii) Identification of lengthy span  |
| Underground Cables  |
| (i) Checking & tightening of earthing connections                             |
| (ii) Inspection of Door / Hinges of Feeder Pillar which are found             |
| opened/damaged,   |
| (iii) Checking & tightening of connections at Feeder / Mini Pillar            |
| (iv) Identification of location where cable above the ground level            |
| (vI Checking of Feeder / Mini Pillar Foundation                               |

Note:

The Schedule "A" activity will be carried out during the planned outage / shutdown period given by only concerned Executive Engineer and the maintenance work carried out will be certified by Section in Charge as per the Check List for LT equipments provided in the tender documents.

#### **SCHEDULE "B"**

Overhead LinesRepair & replacement of damaged fabricationsLabour charges for guarding where guarding is not providedProviding of Muffing to any type of poles in 1:2:4 with supply of all materialincluding cement, Size-60cm Dia. Round type and 60cm height with tapering at<br/>top.

#### Providing loop type Guarding of both end of span /Guard wire / loop

Labour charges for providing LT spacers(at 3 places)

Providing and fixing of stay set

Providing and fixing of LT earthing to LT support

**Underground Cables** 

Re-insulating of damaged insulated cables by LT Tape

Identification of temporary joint connections and conversion into permanent joints

For 50 /70/95/120 sqmm LT joints

For 185/240/300 sqmm LT joints

Underground cables to be buried which are lying on surface of ground level, as per standard method

Replacement of cable lugs if found loose / damaged/burnt.

Replacement of HRC Fuse Base, Bus Bar Patti and Z-Patti

#### SCHEDULE "C"

**Overhead Lines LT** 

Providing of Mid-Pole and Replacement of damaged / rusted pole

Replacement of damaged / rusted RSJ LT pole including removal of existing line & pole, digging of pit, erection of new pole (concreting charges will be paid extra) & fitting of all accessories, fabrication etc to the pole & reconnecting of lines on the pole

1. RSJ 125 x 70 mm up to 8 Mtr.

2. RSJ 175 x 85 mm up to 9 Mtr

Concreting & muffing of RSJ LT poles including supply of cement,  $3/4'' \times 3/4''$  machine broken metal & screen sand (Concreting ratio 1:4:8) to form 0.3 cmt of concrete. Cement required for 0.3 cmt = 110 kg.

Replacement of damaged PSC pole including removal of existing line & pole, excavation of pit, erection of new pole (concreting charges will be paid extra) & fitting of all accessories, fabrication etc to the pole & restringing of lines on the pole

1. PSC Pole 8 Mtr.

Concreting & muffing of PSC LT poles including supply of cement,  $3/4'' \times 3/4''$ machine broken metal & screen sand (Concreting ratio 1:4:8) to form 0.3 cmt of concrete. Cement required for 0.3 cmt = 110 kg.

#### Straightening of Tilted pole

1. PSC Pole 8 mtr including backfilling, ramming, tightening etc

2. RSJ Pole of any size including backfilling, ramming, tightening etc

Replacement of conductor 1ph 3wire



Replacement of conductor 3ph 4 wire

Replacement of conductor 3ph 5 wire

#### **Underground Cables**

Replacement of deteriorated of LT feeder Pillars- mini, /2 -3 way/4 way

Replacement of deteriorated of LT feeder Pillars -6way/8way

Replacement of damage foundation of Lt feeder pillar -Mini,2-3 way ,4 way Replacement of damage foundation of Lt feeder pillar -6way ,8way

Removing of old paint by scrubbing ,and painting of LT feeder pillars with 2 coates of red oxide paints and 1 coates of red and black bituminus paints-Mini/2/3 way,4 way

Removing of old paint by scrubbing ,and painting of LT feeder pillars with 2 coates of red oxide paints and 1 coates of red and black bituminus paints-6 way,8 way

#### **Replacement of Meter /Meter taken outside**

Replacement of Single Phase Meter with providing of Meter terminal cover & sealing

Replacement of Three Phase Meter with providing of Meter terminal cover & sealing

Replacement of CT operated Meter with box including CT embedded meter with sealing of MTC & Meter Box including of removing of old meter & box, crediting to the store and submission of initial reading of New Meter & final reading of old meter to system.

Shifting of Single Phase Meter from inside the premises to outside including work of meter replacement, earthing and replacement of old WPTC by new one from Pole to Meter

Shifting of Three Phase Meter from inside the premises to outside including work of meter replacement, earthing

Shifting of Three Phase Meter from inside the premises to outside including work of meter replacement, earthing and replacement of old WPTC by new one from Pole to Meter

Shifting of CT operated Meter from inside the premises to outside including work of meter replacement with box including CT embedded meter with sealing of MTC & Meter Box including of removing of old meter & box, crediting to the store and submission of initial reading of New Meter & final reading of old meter to system

#### **CHECK LIST FOR PREVENTIVE MAINTENANCE OF LT OVERHEAD LINES**

Name of division/ Sub-division:

Date of inspection

Name of DTC:

#### LT line area

|     |             |                         |                |            | Correc | Furthe |
|-----|-------------|-------------------------|----------------|------------|--------|--------|
|     |             |                         |                |            | tive   | r      |
| Sr. |             |                         |                | Present    | Action | action |
| N   | Item to be  | Brief Description of    | How it is to   |            | taken  | requir |
| 0   | Inspected   | Work                    | be done        | status     | for    | ed for |
| Ŭ   |             |                         |                |            | minor  | major  |
|     |             |                         |                |            | works  | works  |
|     |             | Damages / broken        |                |            |        | WOILD  |
|     |             | poles or for ground     |                |            |        |        |
|     |             | level erosion and       |                | OK/Needs   |        |        |
| 1   |             | corrosions where the    | Visual         | replaceme  |        |        |
|     |             | pole is not capable of  | Inspection     | nt         |        |        |
|     | Poles-Steel | safely supporting its   |                |            |        |        |
|     | Cement      | load                    |                |            |        |        |
|     |             | Unauthorized            |                | OK (N      |        |        |
| 2   |             | attachments such as     | Visual         | OK/Needs   |        |        |
| Z   |             | fencing, aerial wires   | Inspection     | replaceme  |        |        |
|     |             | etc.                    |                | nt         |        |        |
|     |             |                         | Ensure that    | 90         |        |        |
|     |             | Correct direction and   | the pole is    | degree/les |        |        |
| 4   |             | proper angle of the     | perpendicula   | s than 90  |        |        |
|     |             | stay                    | r to the earth |            |        |        |
|     |             |                         | surface        | degree     |        |        |
|     |             | Loose broken or any     | Visual and     | Ok/Needs   |        |        |
| 5   |             | other damage done to    | physical       | to be      |        |        |
|     |             | stay                    | Inspection     | attended   |        |        |
|     |             |                         |                | stay       |        |        |
|     |             | Whether stay insulator  | Visual and     | insulator  |        |        |
| 6   |             | is intact/whether stay  | physical       | provided/  |        |        |
|     | Stays       | is properly earthed     | Inspection     | not        |        |        |
|     |             |                         |                | provided   |        |        |
|     |             | If stay rods are        | Visual and     | Ok/Needs   |        |        |
| 7   |             | corroded. Attend the    | physical       | to be      |        |        |
|     |             | same if required.       | Inspection     | attended   |        |        |
| _   |             |                         | Visual and     | Ok/Needs   |        |        |
| 8   |             | Tighten the loose stays | physical       | to be      |        |        |
|     |             |                         | Inspection     | attended   |        |        |
|     |             | Replace the             | Visual and     | Ok/Needs   |        |        |
| 9   |             | Broken/damaged          | physical       | to be      |        |        |
|     |             | stays and stay bows     | Inspection     | attended   |        |        |
| 10  |             | Replace the broken stay | Visual and     | Ok/Needs   |        |        |
| 10  |             | insulator/recondition   | physical       | to be      |        |        |
|     |             | the earth               | Inspection     | attended   |        |        |
| 10  |             | Checking of Broken      | Visual and     | Ok/Needs   |        |        |
| 12  | Insulators  | shackle Insulator       | physical       | to be      |        |        |
|     |             |                         | Inspection     | attended   |        |        |



| 13 |   | Proper sag, set right<br>the same, if required   | Visual and<br>physical<br>Inspection | Loose<br>span/less<br>clearance<br>between<br>conductor<br>to ground |  |
|----|---|--|--------------------------------------|--|--|
| 14 |   | Proximity of trees and<br>other objects including<br>building etc.   | Visual and<br>physical<br>Inspection |  |  |
| 15 |   | Sufficient clearance<br>between conductors<br>and earth wire and<br>also from the ground   | Visual and<br>physical<br>Inspection | adequate<br>clearance/<br>less<br>clearance                          |  |
| 16 | Conductor<br>s and<br>earth wire            | Sufficient clearance<br>from other<br>electric/telephone<br>lines passing along<br>below or above it.                                | Visual and<br>physical<br>Inspection | adequate<br>clearance/<br>less<br>clearance                          |  |
| 17 |   | Earth wire is properly<br>supported  | Visual and<br>physical<br>Inspection |  |  |
| 18 |   | Checking of bindings<br>wire for looseness   | Visual and<br>physical<br>Inspection |  |  |
| 19 |   | All joints and jumpers<br>of aluminium<br>conductors have<br>proper<br>clamps/jointing<br>sleeves, Straight the<br>same, if required | Visual and<br>physical<br>Inspection |  |  |
| 20 |   | Proper supporting and<br>jointing two ends of<br>the jumpers with<br>suitable clamps   | Visual and<br>physical<br>Inspection |  |  |
| 21 | lumpors                                     | Sufficient clearance<br>between jumpers on<br>the three phases   | Visual and<br>physical<br>Inspection |  |  |
| 22 | Jumpers<br>and other<br>line<br>accessories | Sufficient clearance of jumpers from metal   | Visual and<br>physical<br>Inspection |  |  |
| 23 |   | Provision of proper insulation of jumpers  | Visual and<br>physical<br>Inspection | loose/Tigh<br>t  |  |
| 24 |   | Signs of overheating<br>and burnings on<br>jumpers and other<br>fittings   | Visual and<br>physical<br>Inspection | ok/burnt/<br>loose   |  |

| 25 |                  | Loose/defective<br>clamps jointing<br>sleeves, bolts and nuts<br>and other fittings  | Visual and<br>physical<br>Inspection |  |  |
|----|------------------|--|--------------------------------------|--|--|
| 26 | Tree<br>trimming | Cut off the tree<br>branches where<br>necessary to maintain<br>a minimum clearance<br>of 1.8 m on each side<br>of the line | Visual and<br>physical<br>Inspection |  |  |

The agency carrying out maintenance should take the photo graphs before and after maintenance and upload the photograph and Checklist in ERP system

Signature of Agency

Above work as mentioned/ detailed above have been carried out by the agency in my presence. I endorse that work as detailed above have been satisfactorily done.

Signature of the Section in charge Name CPF No.: Date:

CHECK LIST FOR PREVENTIVE MAINTENANCE OF LT UNDERGROUND CABLES Name of division/ Sub-division: Date of inspection Name of DTC: LT UG area



| Sr.<br>N<br>o | Item to be<br>Inspected  | Brief Description of<br>Work   | How it is to<br>be done   | Present<br>status  | Correc<br>tive<br>Action<br>taken<br>for<br>minor<br>works | Furthe<br>r<br>action<br>requir<br>ed for<br>major<br>works |
|---------------|--------------------------|--|---|--|--|---|
| 1             |                          | Inspection of Doors /<br>Hinges which are<br>found opened or<br>damaged  | Visual<br>Inspection  | OK/Needs<br>replaceme<br>nt  |  |   |
| 2             |                          | Unauthorized<br>attachments such as<br>fencing, aerial wires<br>etc.   | Visual<br>Inspection  | OK/Needs<br>replaceme<br>nt  |  |   |
| 3             | Feeder<br>Pillar         | Checking of Red Hot<br>spot inside the feeder<br>pillar & Tightening all<br>connections inside the<br>Feeder Pillar / Mini<br>Pillar | Visual<br>Inspection  | OK/Needs<br>replaceme<br>nt  |  |   |
| 4             |                          | Checking of HRC Fuse<br>Base, Fuse, Bus Bar<br>and Z-patti   | Visual<br>Inspection  | OK/Needs<br>replaceme<br>nt  |  |   |
| 5             |                          | Inspection of<br>Foundations of Feeder<br>Pillar   | Visual<br>Inspection  | OK/Needs<br>replaceme<br>nt  |  |   |
| 6             |                          | Checking of Earthing<br>of Feeder Pillars  | Visual<br>Inspection  | OK/Needs<br>replaceme<br>nt  |  |   |
| 7             |                          | Checking of any<br>rusting or deteriorated<br>colour   | Visual<br>Inspection  | OK/Needs<br>painting   |  |   |
| 8             |                          | Identification of<br>locations where cable<br>is above ground  | Visual<br>Inspection  | OK/Needs<br>to be<br>buried  |  |   |
| 9             | Undergrou<br>— nd cables | Verification of<br>Temporary joints  | Visual<br>Inspection  | OK/Needs<br>to convert<br>into<br>permanen<br>t                                  |  |   |
| 10            |                          | Checking of load<br>balancing  | Measure the<br>actual load at<br>Distributor &<br>Feeder Pillar | Ok/ Needs<br>to divert<br>the load<br>on<br>underload<br>ed phase<br>by shifting |  |   |



|    |  |                                      | the service<br>connectio<br>ns |  |
|----|--|--------------------------------------|--------------------------------|--|
| 11 | Inspection of condition of service wire if any | Visual and<br>physical<br>Inspection | Ok/Needs<br>to be<br>attended  |  |

The agency carrying out maintenance should take the photo graphs before and after maintenance and upload the photograph and Checklist in ERP system

#### Signature of Agency

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Signature of the Section in charge

Name

CPF No.:

Date:

#### ACTIVITIES TO BE DONE FOR PREVENTIVE MAINTENANCE of HT Lines

#### **SCHEDULE "A"**

| Particulars   |
|---|
| Trimming of Tree Branches coming across the right of way              |
| Checking of Loose Jumpers   |
| Checking & tightening of earthing & check every pole is earthed       |
|   |
| Checking & re-alignment of AB Switch / Isolator for smooth operations |
| Locating of loose span  |
| Checking of Damaged Disc Insulator                                    |
| Checking & replacement of Damaged Pin Insulator per no                |
| Checking & tightening of loose fabrications                           |
| Checking & tightening of Loose Guarding                               |
| Tightening of loose stay wire   |



In case of composite line, check the cable support wooden clamp so as to avoid load on termination

Checking of lines clearance safety point of view (Horizontal & Vertical) Identification of lengthy span

#### **Preventive Maintenance of HT Underground Cables**

#### Particulars

Checking & tightening of earthing connections including HT feeder Pillar (HTP) & Ring Main Unit (RMU)

Inspection of Door / Hinges of HTP & RMU which are found opened/damaged, Inspection of end terminations of HT Feeder Pillar & Ring Main Unit Checking of any Foundation cracked / damaged of HTP & RMU Physical verification & tightening of Outdoor End Termination Checking & replacement of damaged Fibre / wooden clamp at O/H & U/G cutpoint

Identification of location where cable above the ground level

Note:

The Schedule "A" activity will be carried out during the planned outage / shutdown period given by only concerned Executive Engineer and the maintenance work carried out will be certified by Section in Charge as per the Check List for HT Lines provided in the tender documents.

#### **ACTIVITIES FOR SCHEDULE – B**

#### **Overhead Lines HT**

**Labour charges towards** Providing carpet guarding with 8 SWG GI wire with lacing at Road cross / Line cross where guarding are not provided at Road / Nala crossing **Replacement** of **V** / **Y** cross arms/ fiber glass straight cross arm.

Replacement of damaged / deteriorated Channels

Replacement of damaged / deteriorated Top Clip

**Fixing** Jumpers with Wedge connectors / Loop connector (Material will be provided by MSEDCL, if not said cost will be reimbursed as per MSEDCL Cost Data)

Fixing of HT stay sets including concreting with 1:4:8 ratio to form 0.3 cmt (Cement required for 0.3cmt=110kg) & binding of stay wire 7/8 SWG.

Tightening of loose HT stay sets, re-fixing and binding, labour only

#### **Underground Cables**

Reactive/Re-earthing if Earth Resistance found less value at HTP & RMU

Repair of Door / Hinges of HTP & RMU which are found opened/damaged,

Checking & cleaning of HT Feeder Pillar & Ring Main Unit

Repairing of any Foundation cracked / damaged of HTP & RMU

Replacement of damaged Outdoor / Indoor End Termination



Excavation of cable trench & laying of cable & refilling the cable trench where cable is above the ground **as per Standard Installation practice** 

Checking of Gas pressure in RMU, if found less pressure refill the same at work shop Fixing of **Heat Shrinkable** boots on end termination in HTP / RMU to avoid flashover in rainy season

Note: Activity of Schedule 'B' will be implemented on the receipt of report of Schedule 'A'.

| ACTIVITIES FOR SCHEDULE - C   |
|---|
| Overhead Lines HT   |
| Providing of Mid-Pole and Replacement of damaged / rusted pole                            |
| Replacement of damaged / rusted RSJ pole including removal of existing line & pole        |
| ligging of pit, erection of new pole (concreting charges will be paid extra) & fitting    |
| f all accessories, fabrication etc to the pole & reconnecting of lines on the pole at     |
| Cut Point / Tension Point   |
| . RSJ pole 152x 152 mm up to 13 Mtr.  |
| . RSJ pole 152x152 mm up to 11 mtr.   |
| . RSJ pole 100x116 mm up to 11 Mtr.   |
| . RSJ pole 100x116 mm up to 10 mtr.   |
| 5. RSJ pole 175x85 mm up to 10 mtr.   |
| Concreting & muffing of RSJ poles including supply of cement, 3/4" x 3/4" machine         |
| roken metal & screen sand (Concreting ratio 1:4:8) to form 0.5 cmt of concrete.           |
| Cement required for 0.5 cmt = 182 kg.   |
| Replacement of damaged / rusted RSJ pole including removal of existing line & pole        |
| ligging of pit, erection of new pole (concreting charges will be paid extra) & fitting    |
| f all accessories, fabrication etc to the pole & reconnecting of lines on the pole at     |
| uspension / Pin type In Line  |
| . RSJ 152x 152 mm up to 13 Mtr.   |
| . RSJ pole 152x152 mm up to 11 mtr.   |
| . RSJ pole 100x116 mm up to 11 Mtr.   |
| . RSJ pole 100x116 mm up to 9 mtr.  |
| . RSJ pole 175x85 mm up to 10 mtr.  |
| Replacement of damaged PSC pole including removal of existing line & pole,                |
| xcavation of pit, erection of new pole (concreting charges will be paid extra) &          |
| itting of all accessories, fabrication etc to the pole & restringing of lines on the pole |
| t Cut Point / Tension Point (PSC pole shall be made available at Section office)          |
| Replacement of damaged PSC pole including removal of existing line & pole,                |
| xcavation of pit, erection of new pole (concreting charges will be paid extra) &          |



fitting of all accessories, fabrication etc to the pole & restringing of lines on the pole at Suspension / Pin type In Line (PSC pole shall be made available at Section office) Concreting & muffing of PSC poles including supply of cement,  $3/4'' \ge 3/4''$  machine broken metal & screen sand (Concreting ratio 1:4:8) to form 0.4 cmt of concrete. Cement required for 0.4 cmt = 146 kg.

Straightening of Tilted pole

1. PSC Pole 9 mtr including backfilling, ramming, tightening etc

2. RSJ Pole of any size including backfilling, ramming, tiughtening etc

Replacement of damaged / rusted RSJ / PSC DP structure including removal of existing line & DP structure, digging of pit, erection of new DP structure (concreting charges will be paid extra) & fitting of all accessories, fabrication etc to the DP structure & reconnecting of lines on the DP structure

1. RSJ pole 100x116 mm up to 11 mtr.

2. RSJ pole 152 x 152 mm up to 11 mtr.

3. PSC pole 9 Mtr long

Providing of Muffing to any type of poles in 1:2:4 with supply of all material including cement, Size-60cm Dia. Round type and 60cm height with tapering at top.

Fixing of 33/22 /11 KV pin insulator with pins labour only

Fixing of DO / Horn gap set including accessories labour only.

Paving out and stringing of 3 HT conductors with binding labour only.

1. For 0.1 to 0.2 ACSR/AAAC conductor.

2. For 0.06 upto 0.1 ACSR/AAAC conductor or Equivalent

3. For below 0.06 ACSR/AAAC or equivalent.

Removing of existing poles and dismantling the concreting without cutting the poles and transporting the same to MSEDCL stores

1. 150x150 mm 90/105 lb/yd Rail 13 mtr long HT pole.

2. 152x152 mm up to 13 Mtr

3. 100x116 mm up to 11 Mtr

4. 175x85 mm up to 10 Mtr

Removing of existing line conductor with and crediting at MSEDCL Sub-Division store.

a) HT (3 conductors)

Fixing of cross bracing set to 10' center DP 90/105 lbs per yard / 50x150 mm RSJ.

Fixing of cross bracing set to 8' center DP 90/105 lbs per yard/150x150 mm RSJ.

Fixing of cross bracing set to 5' center DP 90/105 lbs per yard/150x150 mm RSJ.

a)Earth of HT poles by providing 25x3 mm GI flat about 7' long, GI pipe(B/C class) 1" diax6' long, 10 kg coal, 25 kg salt. (all materials at contractor's cost including making of holes in poles)

Installation of AB switches with alignment and jumper connections so as to give trouble free operation including erection of pole pieces for fixing of handle including earthing etc and removing of existing damaged AB switch.

Restringing of loose span conductor (tightening) without disturbing guarding & removing old binding jumpers & tightening of clamps, cross arms, stays etc.

a) HT below 0.06 ACSR

b) HT 0.06 ACSR & above

Replacement of damaged Disc Insulator

Underground Cables



Replacement of HT feeder pillar including civil foundations, removing the old feeder pillar and crediting to store

Replacement of conventional cable end termination with screen (touch proof) cable termination for 22 kV & 33 kV

#### **Replacement of HT Meter cubicle**

a. 11 kV / 22 kV / 33 kV

Replacement of CT & PT inside Meter cubicle

a. resin cast CT

Note: Activity of Schedule 'C' will be implemented after observing the annual budget for maintenance.

#### CHECK LIST FOR PREVENTIVE MAINTENANCE OF 33 kV/22kV/11kV OVERHEAD LINES

Name of division/ Sub-division:

Date of inspection

Name of feeder:

Feeder Code

| Sr<br>N<br>o | Item to be<br>Inspected   | Brief Description<br>of Work   | How it is to<br>be done   | Present<br>status                      | Corrective<br>Action<br>taken for<br>minor<br>works | Further<br>action<br>require<br>d for<br>major<br>works |
|--------------|---------------------------|--|---|--|---|---|
| 1            | Poles-<br>Steel<br>Cement | Damages /<br>broken poles or<br>for ground level<br>erosion and<br>corrosions<br>where the pole<br>is not capable of<br>safely<br>supporting its<br>load | Visual<br>Inspection  | OK/Needs<br>replacemen<br>t            |   |   |
| 2            | Stays                     | Correct direction<br>and proper angle<br>of the stay   | Ensure that<br>the pole is<br>perpendicula<br>r to the earth<br>surface | 90<br>degree/less<br>than 90<br>degree |   |   |
| 3            |                           | Loose broken or<br>any other   | Visual and physical   | Ok/Needs<br>to be                      |   |   |



|    |                            | damage done to<br>stay   | Inspection                           | attended                      |  |
|----|----------------------------|--|--------------------------------------|-------------------------------|--|
| 4  |                            | Whether stay<br>insulator is<br>intact/whether<br>stay is properly<br>earthed                          | Visual and<br>physical<br>Inspection | Ok/Needs<br>to be<br>attended |  |
| 5  |                            | If stay rods are<br>corroded. Attend<br>the same if<br>required.                                       | Visual and<br>physical<br>Inspection | Ok/Needs<br>to be<br>attended |  |
| 6  |                            | Tighten the<br>loose stays   | Visual and<br>physical<br>Inspection | Ok/Needs<br>to be<br>attended |  |
| 7  |                            | Replace the<br>Broken/damage<br>d stays and stay<br>bows   | Visual and<br>physical<br>Inspection | Ok/Needs<br>to be<br>attended |  |
| 8  | 8                          | Provide<br>sufficient barbed<br>wire/cattle<br>guards on the<br>stay to avoid<br>rubbing of<br>cattles | Visual and<br>physical<br>Inspection | Ok/Needs<br>to be<br>attended |  |
| 9  |                            | If the cross-<br>arms/clamps/kn<br>ee has/have<br>slipped.   | Visual and<br>physical<br>Inspection | Ok/Needs<br>to be<br>attended |  |
| 10 | Cross<br>arms and          | Bending of cross<br>arms due to<br>uneven tension  | Visual and<br>physical<br>Inspection | Ok/Needs<br>to be<br>attended |  |
| 11 | pole top<br>steel<br>works | Excessive<br>rusting of the<br>cross arms<br>bracing etc.  | Visual and<br>physical<br>Inspection | Ok/Needs<br>to be<br>attended |  |
| 12 |                            | Loose or<br>damaged<br>bracings. Attend<br>the same, if<br>required.                                   | Visual and<br>physical<br>Inspection | Ok/Needs<br>to be<br>attended |  |
| 13 | Insulators                 | Broken or<br>chipped<br>porcelain<br>flashover marks   | Visual and<br>physical<br>Inspection | Ok/Needs<br>to be<br>attended |  |
| 14 |                            | Tilted insulators  | Visual and<br>physical<br>Inspection | Ok/Needs<br>to be<br>attended |  |



| 15 |   | Proper sag, set<br>right the same, if<br>required  | Visual and<br>physical<br>Inspection | Loose<br>span/less<br>clearance<br>between<br>conductor<br>to ground |  |
|----|---|--|--------------------------------------|--|--|
| 16 |   | Proximity of<br>trees and other<br>objects including<br>building etc.  | Visual and<br>physical<br>Inspection |  |  |
| 17 |   | Sufficient<br>clearance<br>between<br>conductors and<br>earth wire and<br>also from the<br>ground  | Visual and<br>physical<br>Inspection |  |  |
| 18 | Conductor<br>s and<br>earth wire                | Sufficient<br>clearance from<br>other<br>electric/telepho<br>ne lines passing<br>along below or<br>above it.                               | Visual and<br>physical<br>Inspection |  |  |
| 19 |   | Earth wire is<br>properly<br>supported   | Visual and<br>physical<br>Inspection |  |  |
| 20 |   | Checking of<br>bindings wire<br>for looseness  | Visual and<br>physical<br>Inspection |  |  |
| 21 |   | All joints and<br>jumpers of<br>aluminium<br>conductors have<br>proper<br>clamps/jointing<br>sleeves, Straight<br>the same, if<br>required | Visual and<br>physical<br>Inspection | crimping<br>required/n<br>ot required                                |  |
| 22 | Jumpers<br>and other<br>line<br>accessorie<br>s | Proper<br>supporting and<br>jointing two<br>ends of the<br>jumpers with<br>suitable clamps,<br>Crimping of<br>jumpers using<br>hydraulic   | Visual and<br>physical<br>Inspection |  |  |

|    |                                 | crimping<br>machine with<br>using sleeves<br>and T connector   |                                      |  |  |
|----|---------------------------------|--|--------------------------------------|--|--|
| 23 |                                 | Sufficient<br>clearance<br>between<br>jumpers on the<br>three phases   | Visual and<br>physical<br>Inspection |  |  |
| 24 |                                 | Sufficient<br>clearance of<br>jumpers from<br>metal  | Visual and<br>physical<br>Inspection |  |  |
| 25 |                                 | Provision of<br>proper<br>insulation of<br>jumpers   | Visual and<br>physical<br>Inspection |  |  |
| 26 |                                 | Signs of<br>overheating and<br>burnings on<br>jumpers and<br>other fittings  | Visual and<br>physical<br>Inspection |  |  |
| 27 |                                 | Loose/defective<br>clamps jointing<br>sleeves, bolts<br>and nuts and<br>other fittings   | Visual and<br>physical<br>Inspection |  |  |
| 28 | Tree<br>trimmings<br>and bird's | Cut off the tree<br>branches where<br>necessary to<br>maintain a<br>minimum<br>clearance of 1.8<br>m on each side<br>of the line | Visual and<br>physical<br>Inspection | location<br>number<br>where tree<br>trimming<br>required |  |
| 29 | nests etc.                      | Remove all<br>bird's nests<br>(Once before the<br>monsoons or<br>earlier, if<br>necessary)                                       | Visual and<br>physical<br>Inspection |  |  |



| 30 | Earthing<br>system           | Replace all<br>broken earth<br>leads and<br>tighten others.<br>Measure earth<br>resistance of<br>various earths<br>with earth.<br>Tester. In case of<br>low values,<br>recondition<br>them.                                       | To be<br>measured by<br>earth tester.<br>The value of<br>earth<br>resistance<br>should be<br>less than 5<br>Ohm | Low/high |  |
|----|------------------------------|---|---|----------|--|
| 31 |                              | Lubrication of<br>AB switch and<br>checking for<br>proper<br>operation  | Visual and<br>physical<br>Inspection  |          |  |
| 32 |                              | Checking Line<br>and earth<br>connection at AB<br>switches.   | Visual and<br>physical<br>Inspection  |          |  |
| 33 | AB<br>3 switch/<br>Isolators | Replacement of<br>burnt copper<br>flexible belt of<br>AB switch   | Visual and<br>physical<br>Inspection  |          |  |
| 34 |                              | Checking of<br>alignment of<br>Isolators  | Visual and<br>physical<br>Inspection  |          |  |
| 35 |                              | Checking of Male<br>female contact of<br>Isolators  | Visual and<br>physical<br>Inspection  |          |  |
| 36 |                              | Replacement of<br>deteriorated<br>conductor   | Visual and<br>physical<br>Inspection  |          |  |
| 37 | Guarding                     | Attending<br>damaged<br>/broken HT<br>guarding using<br>6/8 SWG G.I<br>.wire including<br>fixing of<br>guarding cross<br>arm(Including<br>earthing of<br>guarding with<br>carpet lace at<br>every 8 feet and<br>6 feet across the | Visual and<br>physical<br>Inspection  |          |  |



| road) |  |  |
|-------|--|--|
|       |  |  |
|       |  |  |
|       |  |  |

The agency carrying out maintenance should take the photo graphs before and after maintenance and upload the photograph and Checklist in ERP system

Signature of Agency

Above work as mentioned/ detailed above have been carried out by the agency in my presence. I endorse that work as detailed above have been satisfactorily done.

Signature of the Section in charge

Name

CPF No.:

Date:

#### CHECK LIST FOR PREVENTIVE MAINTENANCE OF 33kV/22kV/11Kv UNDERGROUND CABLE

Name of division/ Sub-division:

Date of inspection

Name of feeder:

Feeder Code

| Sr No | Item to be<br>Inspected | Brief<br>Description<br>of Work | How it is to be done | Present status | Corre<br>ctive<br>Actio<br>n<br>taken<br>for<br>mino<br>r<br>work<br>s | Furthe<br>r<br>action<br>require<br>d for<br>major<br>works |
|-------|-------------------------|---------------------------------|----------------------|----------------|--|---|
|-------|-------------------------|---------------------------------|----------------------|----------------|--|---|

| 1 | 33kV/22kV/<br>11kV Cable<br>and cable<br>boxes | Proper<br>supporting<br>of the cable<br>and the<br>cable boxes | By providing<br>fibre/wooden<br>clamps   | clamps<br>damaged/ Ok     |  |
|---|--|--|--|---------------------------|--|
| 2 |  | Tight and<br>intact<br>connections                             | Apply CRC on<br>corroded part and<br>then remove the old<br>connection .apply<br>the HT tape.<br>reconnect the cable<br>ensuring firm<br>tightening                                    |                           |  |
| 3 |  | Proper<br>earthing   | To be measured by<br>earth tester. The<br>value of earth<br>resistance should be<br>less than 5 Ohm.<br>Ensure that flexible<br>earth band is<br>earthed at both end<br>of the cables. | Low/high                  |  |
| 4 |  | Overall<br>condition of<br>the cable<br>and joint              |  | Good/Bad                  |  |
| 5 |  | Checking of<br>RMU covers<br>for locking<br>arrangemen<br>t    | Visual and physical<br>Inspection  |                           |  |
| 6 | RMU(Ring<br>Main Unit                          | Checking of<br>SF6 gas<br>Pressure<br>Gauge<br>Indication      | Manometer (SF6<br>Gas Pressure)  | Green<br>zone/Red<br>zone |  |
| 7 |  | Checking of<br>earth<br>resistance                             | By earth resistance<br>meter   | Low/high                  |  |



|   |                     | Check the<br>functions of<br>the Breaker,<br>Isolator &<br>earth Switch | Interlocking<br>between<br>a) Breaker and OFF<br>Load Switch (in case<br>vaccum Breaker)<br>b)Breaker and Earth<br>Switch (in case SF6<br>Breaker)<br>c) Earth Switch and<br>Cable door | When Breaker<br>is in closed<br>position, OFF<br>Load Switch<br>should not<br>operate<br>whether the<br>Switch is in<br>closed<br>position or in<br>Open position.<br>b) When<br>Breaker is in<br>closed<br>position, earth<br>switch of the<br>same should<br>not be closed<br>and vice-<br>versa. c) When<br>the Earth<br>Switch is in<br>closed<br>position then<br>only cable<br>door can be<br>open and vice<br>versa |  |
|---|---------------------|---|---|--|--|
| 9 | HT Feeder<br>Pillar | of Doors /<br>Hinges<br>which are<br>found<br>opened or<br>damaged      | Visual Inspection   | OK/Needs<br>replacement  |  |



| 10 | Inspection<br>of<br>Foundations<br>of Feeder<br>Pillar     | Visual Inspection | OK/Needs<br>replacement |  |
|----|--|-------------------|-------------------------|--|
| 11 | Checking of<br>Earthing of<br>Feeder<br>Pillars            | Visual Inspection | OK/Needs<br>replacement |  |
| 12 | Checking of<br>any rusting<br>or<br>deteriorated<br>colour | Visual Inspection | OK/Needs<br>painting    |  |

The agency carrying out maintenance should take the photo graphs before and after maintenance and upload the photograph and Checklist in ERP system

Signature of Agency

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Signature of the Section in charge Name CPF No.: Date:



#### ACTIVITIES TO BE DONE FOR PREVENTIVE MAINTENANCE SCHEDULE "A"

| Activity to be carried out  |  |  |  |  |  |
|---|--|--|--|--|--|
| (i) Checking of oil level, if found less top up to the mark         |  |  |  |  |  |
| (ii) Attending leakages of oil from DTC                             |  |  |  |  |  |
| (iii) Checking & tightening of earthing & neutral connections       |  |  |  |  |  |
| (iv) Cleaning surrounding area of Dist. Transformer                 |  |  |  |  |  |
| (v) Checking & replacing of Breather / Silica Gel                   |  |  |  |  |  |
| (vii) Checking & re-alignment of AB Switch & Horn gap/Do fuse unit  |  |  |  |  |  |
| (viii) Checking & repairing of Distribution Box cover               |  |  |  |  |  |
| (ix) Checking of ACB of Distribution Transformer(315 KVA and above) |  |  |  |  |  |
| (x) Replacement of LT rod including rod ,cone washer                |  |  |  |  |  |

Note:

The Schedule "A" activity will be carried out during the planned outage / shutdown period given by only concerned Executive Engineer and the maintenance work carried out will be certified by Section in Charge as per the Check List for DTC provided in the tender documents.

| SCHEDULE - B   |
|--|
| Upto 315 kVA   |
| Replacement of HT jumpers at DTC if found damaged (Outdoor DTC)    |
| Replacement of damaged / deteriorated Distribution Box             |
| Replacement of LT termination at DTC if found damaged              |
| Above 315 kVA  |
| Replacement of HT <b>Cable</b> termination at DTC if found damaged |
| Replacement of LT <b>Cable</b> termination at DTC if found damaged |

Note: Activity of Schedule 'B' will be implemented on the receipt of report of Schedule 'A'.



| (i) 100 gm   |
|--|
| (ii) 250 gm  |
| (iii) 500 gm   |
| Replacement of damaged 3.5 LT cables between LV side of DTC to Distribution box(DB)        |
| Replacement of gasket of top cover   |
| Replacement of 3.5C cable by single core between LV side of DTC to Feeder Pillar having    |
| capacity more than 315 kVA (Single core cable will be provided by MSEDCL)                  |
| Digging of 6 no. of Earth pits & providing Earthing with 7/8 SWG G.I. wire with salt-50kg, |
| Coal-40kg (G.I. <b>strip</b> & earthing pipes will be provided by MSEDCL)                  |

Note: Activity of Schedule 'C' will be implemented after observing the annual budget for maintenance.

## CHECK LIST FOR PREVENTIVE MAINTENANCE OF DISTRIBUTION TRANSFORMER CENTER

Name of division/ Sub-division:



#### Date of inspection

#### Name of DTC:

#### DTC Code

|          |                                |   | 1   |                | T   |  |
|----------|--------------------------------|---|---|----------------|---|--|
| Sr<br>No | Item to be<br>Inspected        | Brief Description<br>of Work  | How it is to<br>be done   | Present status | Corrective<br>Action<br>taken for<br>minor<br>works | Further<br>action<br>required<br>for<br>major<br>works |
| 1        | General<br>Upkeeping of<br>DTC | Maintaining DTC<br>Yard, Cleaning &<br>Watering of<br>Earth Pits,<br>removing<br>creepers on DP<br>structure.   | Visual and<br>physical<br>Inspection  |                |   |  |
| 2        | Earthing                       | Checking and<br>tightening of all<br>Earth<br>connections,<br>Checking Earth<br>connections for<br>HV and LV<br>Bushings<br>including LV and<br>neutral | To be<br>measured by<br>earth<br>tester.The<br>value of<br>earth<br>resistence<br>should be<br>less than 5<br>Ohm             | Low/high       |   |  |
| 3        | Breather                       | Reconditioning<br>of Breather by<br>reactivation of<br>Silica Gel or<br>Replacement &<br>Maintaining Oil<br>Seal.                                       | Colour of<br>good silica<br>jel is blue.if<br>found pink<br>then replace<br>the same or<br>dry it by<br>heating and<br>reuse. | Blue/Pink      |   |  |
| 4        | Distribution<br>Box            | Checking of<br>condition of<br>hinges of<br>doors/condition<br>of distribution<br>box, locking<br>arrangement,<br>cleaning of DB by<br>blower           | Visual and<br>physical<br>Inspection  |                |   |  |
| 5        | LT Fuses                       | Checking of LT<br>Fuses, LT fuse<br>base,<br>replacement of   | Visual and<br>physical<br>Inspection  |                |   |  |



|    |  | fuse wires,<br>replacement of<br>damaged kit Kats  |   |                                      |  |
|----|--|--|---|--------------------------------------|--|
| 6  | DO fuse/horn<br>gaps                   | Replacement of<br>improper size of<br>DO fuse and<br>replacement of<br>insulator   | Visual and<br>physical<br>Inspection  |                                      |  |
| 7  | Measurement<br>of Current &<br>Voltage | Measurement of<br>Load current R-<br>ph, Y-Ph,B-Ph<br>and Neutral  | Tong tester   | Balance<br>load/diversion<br>of load |  |
| 8  |  | Measurements of<br>Voltages at the<br>transformer &<br>tail ends.  | Tong tester   |                                      |  |
| 9  | LA                                     | Checking of Earth<br>connection for<br>Lightening<br>Arrestor  | To be<br>measured by<br>earth<br>tester.The<br>value of<br>earth<br>resistance<br>should be<br>less than 5<br>Ohm | Low/high                             |  |
| 10 | LV side cable                          | Checking of LT<br>cable and<br>tightening of<br>cable connection,<br>replacement of<br>burnt and<br>damaged Lugs   | Visual and<br>physical<br>Inspection  | Loose/Ok                             |  |
| 11 | Minor repairs                          | Attending minor<br>oil leakages by<br>gasket<br>replacement,<br>Attending HV<br>and LV side<br>bushing,, proper<br>crimping of<br>HT/LT Lugs,<br>removing of<br>carbon at joints | Visual and<br>physical<br>Inspection  |                                      |  |



The agency carrying out maintenance should take the photo graphs before and after maintenance and upload the photograph and Checklist in ERP system

Signature of Agency

Above work as mentioned/ detailed above have been carried out by the agency in my presence. I endorse that work as detailed above have been satisfactorily done.

Signature of the Section in charge

CPF No.:

Date:





Office of the Executive Engineer, Maharashtra State Electricity Distribution Co. Ltd. Gandhibag Division Dist-Nagpur Pin 440008 Telephone :9607926428 Email:eegandhibag@gmail.com

TENDER NO. EE/GBDN/T/PM HT LT DTC/Itwari/23-24/T-03

#### (PRICE BID)

Annual tender for the work of Preventive Maintenance of DTC, LT & HT overhead lines & underground cables in Itwari Sub-division under Gandhibag Division of Nagpur Urban Circle under

Nagpur Zone.

E.M.D. Rs. 25,000/-(Rs-Twenty Five thousand only)



#### UNDERTAKING

I / we hereby undertake to abide by the following condition of the Tender: That the EMD deposited against the above mentioned tender shall be liable for forfeiture in full, if either:-

- 1) I / we withdraw my / our tender before the company finalized the decision of acceptance the tender.
- 2) In case my / our tender is accepted by the company and I / we fail to pay the P.B.G. / Security Deposit as per Tender conditions against this tender within stipulated period.

Place :

Signature of Tenderer

Date:



#### LETTER TO THE EXECUTIVE ENGINEER

To,

Executive Engineer,

Maharashtra State Electricity Distribution Co. Ltd.,

\_\_\_\_\_ Division, Dist. \_\_\_\_, Pin \_\_\_\_\_

Dear Sir,

I/We agree for the rates tendered by me/us subject to the condition of the tender and for which I/We have carefully read and which I/We have thoroughly understood and to which I/We hereby agree.

I/We hereby agree to keep this offer open for 60 days after the returnable date of the Tenders and shall be bound by communication of acceptance dispatched within the prescribed time.

Yours faithfully,

DATE:

Name & Address of the Tenderer.

Seal and Signature of the Tenderer.



#### **Price Bid**

| Description  | % Rate for Year |
|--|-----------------|
| charges including consumables item as per Annexure D<br>towards Preventive Maintenance of DTC, LT & HT<br>overhead / underground lines for the activities given in<br>Annexure "E" |                 |

- 1. While quoting the rates the bidder should refer Annexure E The rates quoted should be inclusive of consumable items as per Annexure-D.
- 2. The major material will be provided by MSEDCL such as conductor, poles, cables, pillars etc if available. However, in case these materials are not available with MSEDCL, the same will be supplied by the contractor @ rate of prevailing cost data of MSEDCL together with price indexing if applicable. These material are listed at Annexure-C.
- 3. If the Cost of any material /equipment is not available in the Cost Data, the same shall be taken from the work executed in the adjoining Division/Circle.
- 4. The cost of transportation of material will be reimbursed by MSEDCL on the cost of major material, as per Annexure-C, as per prevailing cost data, at a rate of 4% on material supplied by contractor and at a rate of 1% for material supplied by MSEDCL and towards crediting of old material to store.
- 5. Old / Damaged cables / materials removed from site shall be credited to Divisional Stores by the Agency.
- 6. Applicable rate of G.S.T. \_\_\_\_\_%(as per notification published).

Seal and Signature of the Tenderer.