महाराष्ट्र शासन

MAHATMA PHULE RENEWABLE ENERGY & INFRASTRUCTURE TECHNOLOGY LTD. (MAHAPREIT),

(Subsidiary of MPBCDC, a Government of Maharashtra undertaking)

(Open Tender Basis)
BID DOCUMENT

Tender for Land Development and Power Evacuation works with 33KW substation for 3 MW Solar Power Project on land at Kelapur, Taluka Wardha, District Wardha for **National Cancer Institute Nagpur,** which includes land cutting & filling, removal of shrubs, trees, bushes etc., & providing of internal roads and drainage with Power Evacuation & Transmission Infrastructure up to Inter Connection Point of STU.

Bid Document No: MAHAPREIT/RESCO/1/25-26/ **December-2025**

Corporate Office
B-501 Pinnacle Corporate Park,
Next to Trade Center, BKC,
Bandra (East), Mumbai – 400051.
Website: https://mahapreit.in
CIN No: U40106MH2021SGC358784

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SECTION – I

NOTICE INVITING TENDER (NIT)

MAHATMA PHULE RENEWABLE ENERGY & INFRASTRUCTURE TECHNOLOGY LIMITED

Subsidiary of MPBCDC (Gov. of MH Undertaking)

(Open Tender Basis)
NOTICE INVITING TENDER

BID DOCUMENT NO: MAHAPREIT/RESCO-01/25-26 **December, 2025**

SUBJECT: Tender for Land Development and Power Evacuation works with 33KW substation for 3 MW Solar Power Project on land at Kelapur, Taluka Wardha, District Wardha for **National Cancer Institute Nagpur,** which includes land cutting & filling, removal of shrubs, trees, bushes etc., & providing of internal roads and drainage with Power Evacuation & Transmission Infrastructure up to Inter Connection Point of STU.

I. **Mahatma Phule Renewable Energy and Infrastructure Technology Ltd (MAHAPREIT)** - MAHAPREIT was set up in April 2021 to venture into RE and Green technology areas and infrastructure projects as fully owned subsidiary of MPBCDC and the Govt of Maharashtra has allowed to take up RE and Green energy , Infrastructure projects on Govt to Govt basis (G2G basis) vide GR dated 10th July 2023 . Government of Maharashtra has set up the "Mahatma Phule Backward Classes Development Corporation on July 10, 1978 under the Companies Act,
1956 with the main objective of accelerating the economic upliftment of the economically weaker families of SC communities in the State of Maharashtra. The ratio of shareholding between State and Central Government is 51:49 % respectively having authorized share capital of Rs. 1000 Crore.

II. MAHAPREIT having objectives to establish and carry-on business of Generating, Trading, Operating, Leasing and Renting Renewable Power Projects, mainly but not limited to Solar Power Projects including Solar Parks along with sub-stations and transmission lines on ownership and/or build, own and transfer basis. Further objects are to establish and/or carry on business in relation to Decarbonization and energy efficiency, battery storage solutions, alternative fuel cell technology and climate change issues in accordance with Ministry of New and Renewable Energy (MNRE) schemes/policies or Ministry of Power or any such department of Govt of India (GoI) and its PSU/companies and Govt of Maharashtra (GoM) Energy dept's Renewable Energy Policy as amended from time to time and all incidental and allied activities required for such business.

III. NAVYUG SCHEME

MAHAPREIT implements "NAVYUG SCHEME" to get the integrated, inclusive and comprehensive effects of all the input supports of MAHAPREIT company to the target beneficiaries of MPBCDC Limited as defined from time to time by Govt of Maharashtra.

MAHAPREIT undertakes such projects under different verticals like –

1. Renewable Energy with Solar Power, hybrid and RE centric Projects,
2. ESCO model Energy saving Scheme for ULB & Govt Of Maharashtra agencies.
3. Agro Processing Value Chain and Biofuels,
4. Affordable Housing, ARHS and schemes under MoUHA, GoI under EWS and PMAY,
5. Highway and Infrastructure Projects,
6. Environment and Climate Change,
7. New and Emerging Technology Projects especially in Green Hydrogen, Futuristic Energy Integration Projects,
8. Software Technology and Application-Based Services and CSR Projects.

The Mahatma Phule Renewable Energy & Infrastructure Technology Limited, Mumbai, India (MAHAPREIT) invites online Bids on open tender basis Single Stage Two Envelope (i.e., Envelope-I: Techno-Commercial Bid and Envelope-II: Price Bid) for Power Evacuation work with 33KW bay for **National Cancer Institute Nagpur** with the capacity of **3 MW** which includes providing of internal roads along with drainage system, Prefab security cabin etc.. with Power Evacuation & Transmission Infrastructure up to Inter Connection Point of STU upto 132/33KV Deoli substation of MSETCL of village Kelapur district Wardha for setting up Solar Project in the State of Maharashtra

Brief Details/Key Input

S. No.	Description of Item	Particulars
1.	Brief Scope of Work	Tender for Land Development and Power Evacuation works with 33KW substation for 3 MW Solar Power Project on land at Kelapur, Taluka Wardha, District Wardha for **National Cancer Institute Nagpur,** which includes land cutting & filling, removal of shrubs, trees, bushes etc., & providing of internal roads and drainage with Power Evacuation & Transmission Infrastructure up to Inter Connection Point of STU.
2.	(a) Duration of Engineering, Procurement and Construction (EPC) (b) Duration of Comprehensive Operative & maintenance (O&M)	a) 100 days for land development and power evacuation arrangement b) Operation and maintenance of evacuation line and switch yard for 5 Years
3.	Cost of Bid document (non-refundable)	INR 10,000.00 (Ten Thousand only) + 18% GST= INR 11,800.00 /- Bidders can pay for the cost of documents in the form of electronic transfer/NEFT: In online mode only. The Bidder shall be required to forward the copy of electronic fund transfer receipt from their registered E-mail ID to MAHAPREIT Email ID: cgm.re1@mahapreit.in & cfo@mahapreit.in requesting for access of download of the bidding documents in the working day **Bid without cost of bid document shall not be considered for the bidding and such bids shall not be opened by MAHAPREIT.**
4.	Earnest Money Deposit (Bid security deposit)	The EMD is Rs 4 lakhs (Rs Four Lakhs) The bank detail of MAHAPREIT Ltd for Bank Guarantee by online mode only
5.	Bid documents available for downloading	From 10.12.2025, 15:00 to 29.12.2025 ,15:00
6.	Website for downloading of Bid documents/uploading of filled in Bid Response Sheets only in e-mode	https://mahatenders.gov.in/ https://mahapreit.in/
7.	Date & Time of Pre-bid meeting	15/12/2025 at 15:00 Hrs
8.	Venue of Pre-bid Meeting	MAHAPREIT office, Pinnacle Corporate Park, 5th Floor, BKC, Bandra (East) Mumbai.
9.	Last date and time of submission of bid	29.12.2025 at 15:00 hrs
10.	Date & time of opening of Techno-commercial Bid	30.12.2025 at 16:00 hrs

S. No.	Description of Item	Particulars
11.	Date & time of opening of Price Bid	Will be intimated later on.
12.	Address for submission of sealed hard copy of Techno-commercial bid & Opening of Bids	MAHAPREIT, B-501 Pinnacle Corporate Park, Next to Trade Center, BKC, Bandra (East), Mumbai – 400051.
13.	Currency of Bids	Indian Rupees (INR)
14.	Bidders' eligibility	Bidders intending to participate in this bid shall fulfil the Eligibility Criteria.
15.	Period of Bid validity	180 days from the last date of submission of bids prescribed by MAHAPREIT and any extension thereof

MAHAPREIT reserves the right to cancel/withdraw this Invitation for Bids without assigning any reason for such decision.

NOTE: This is an e-tender. Offers shall be submitted and processed in electronic mode only. Physical copies of required document will additionally need to be supplied for verification. The instructions to Bidder/terms and conditions appearing in this specification only shall be applicable.

1.1. BIDDER's ELIGIBILITY CRITERIA

Above tender is an Open Tender and all the reputed & experienced contractors & EPC Vendors from within India (hereinafter called "Bidders") shall be eligible to participate in NIT subject to fulfilling the following eligibility criteria:

1.1.1. TECHNICAL CRITERIA

a) Successful experience in executing at least one Transmission Line of 33 KV or above voltage class of minimum 2 km length completed in last 5 (Five) years ending last day of month previous to the one in which NIT is issued. Such Transmission line should be in successful operation for a period of at least 01 year ending last day of month previous to the one in which NIT is issued.

b) The bidder should have 5 Years experience in civil works like, Road and land development, and associated civil works in development of Solar Park/Projects with any Govt. Organization or Reputed Private Organization.

c) The bidder shall execute work order of minimum of Rs 1Crs. and cumulative of Rs 4 Crs during last 5 (Five) years.

d) Direct/Indirect Order

The Bidder shall also be considered qualified, in case the award for executing the reference work has been received by the Bidder either directly from the owner of the plant or any other intermediary organization. In such a case, a certificate from such owner of plant or any other intermediary organization shall be required to be furnished by the Bidder along with its Techno-Commercial bid in support of Bidder's claim of meeting the qualification requirement.

1.1.2. FINANCIAL CRITERIA

1.1.2.1. **The Average Annual Turnover of the Bidder for last three (3) financial years FY22-23 & FY 23-24 & FY24-25 shall be Rs 1 Crs (Rs One Crores) or more**

1.1.2.2. The Net Worth of the Bidder during the last Financial Year 2024-25 shall be positive, wherein the Net Worth shall be calculated as follows:

Net Worth = (Equity + Reserves) – (Revaluation reserves+ intangible assets + miscellaneous expenses to the extent not written off + carried forward losses).

1.1.2.3. The Bidder shall provide a copy each of audited annual report to ascertain their turnover & net-worth.

1.1.2.4. The Bidder shall submit CA certified turnover and net worth certificate of FYs 2022-23, FY23-24 & FY24-25

1.2. SCOPE OF WORK

1.2.1. **Tender for Land Development and Power Evacuation works with 33KW substation for 3 MW Solar Power Project on land at Kelapur, Taluka Wardha, District Wardha for National Cancer Institute Nagpur, which includes land cutting & filling, removal of shrubs, trees, bushes etc., & providing of internal roads and drainage with Power Evacuation & Transmission Infrastructure up to Inter Connection Point of STU.** The scope of the contractor shall be deemed to include all equipment, materials and services which although are not specifically mentioned in the bid documents and/or in contractor's proposal but are necessary for the satisfactory operation of the Solar PV system and its integration with evacuation system.

Detailed scope of Supply and Services is mentioned in **Section-IV:** Technical Specifications of this Bid Document.

1.3. Bidders who have been banned/ de-listed/ black listed/ debarred from business by any PSU/any Government Department/Ministry during last 03 (three) years shall be ineligible to bid. Self-declaration in this regard is to be submitted as per Attachment-05 of Section-V: BRS & Annexures.

1.4. PROCEDURE/REQUIREMENTS FOR E-TENDERING

1.4.1. Bidders The Bidders should download the Main e-RFP Document from the website. https://mahatenders.gov.in https://mahapreit.in/

1.4.2. The Online forms should be filled in completely, and all questions should be answered.

1.4.3. Bidders shall be required to arrange all resources, including Digital Signature and Internet Connections at their own cost, for participating in online tenders/ bids at the portal.

1.4.4. All the Bidders are requested to get themselves registered well in advance and no extra time will be considered for the delay in on-line Vendor Registration, if any. In case Bidder waits till the last moment for uploading bids, and if any technical problem is encountered at that time and the bid closing time may elapses, MAHAPREIT shall not be responsible in any manner for such delay/ or any other reason thereof. The Main RFP document shall be typed on the bidder's letterhead and the signed scanned copy shall be uploaded.

1.4.5. Any overwriting or correction shall be attested. All pages of the Main RFP document shall be numbered and should be submitted as a package with a signed letter of transmittal.

1.4.6. All the information must be filled in the English language only.

1.4.7. Information and certificate(s) furnished along with the application form (the respective application that vouches to the suitability, technical know-how and capability of the bidders) should be signed by the bidders.

1.4.8. The bidders are encouraged to attach any additional information (PDF copies of similar work orders which were already carried out, regarding his capabilities). No further information will be entertained after submission of Main RFP document unless it is requested by MAHAPREIT.

1.4.9. The Main e-RFP document in prescribed forms as required in this booklet duly completed and signed should be uploaded on web site along with all relevant documents. The documents submitted in connection with the pre- qualification shall be treated as confidential and will not be returned.

1.4.10. The cost incurred by bidders in preparing this bid, in providing clarification or attending discussions, meetings, conferences in connection with this document, shall not be reimbursed by the MAHAPREIT under any circumstances.

1.5. CLARIFICATION OF BID SPECIFICATION

1.5.1. The clarification (s), if any, may please be sought separately from either Chief General Manager (RESCOII) **MAHAPREIT, MUMBAI**. cgm.re1@mahapreit.in 022-69214431/625/430The Bidders in their own interest may inform the MAHAPREIT in written about the payment of tender fee by them and their detailed correspondence address with name of contact person, e-mail address etc. so that such clarifications can be sent to them by post/e-mail as may be possible. However, MAHAPREIT's responsibility is restricted to only publishing such clarifications on above mentioned website.

1.5.2. Bidder through the own cost and time visit the site. To participate in the Bid, Bidders are requested to mandatorily undertake a site-visit before pre-bid meeting. Ignorance of the site visit it is risk and cost of Bidder. Bidders are advised to undertake site visit before pre-bid meeting to understand the topography, soil and weather details at their own cost. Any assistance needed from MAHAPREIT to visit the site and project locations may be provided at sole owner option. The Bidder shall carefully examine the Bid Specification and fully inform and satisfy itself as to all the conditions and matters which may in any way affect to work or cost thereof. Failure to furnish all information required by the Bid Specification or to submit a bid not substantially responsive to the Bid Specification in every respect will be at Bidder 's risk and may result in the rejection of the bid.

1.6. ASSISTANCE/CLARIFICATION REGARDING E-TENDERING PROCESS

1.6.1. A Bidder if, find any discrepancies or omissions in the Bid Specifications or have any queries with respect to any provision of the Bid Specifications, he shall at once notify to the MAHAPREIT at below mentioned address:

Chief General Manager (RESCO II)
Mahatma Phule Renewable Energy & Infrastructure Technology Limited.
B-501 Pinnacle Corporate Park, Next to Trade Center,
BKC, Bandra (East), Mumbai – 400051.
Email: cgm.re1@mahapreit.in
Phone No: +91- 8875770715

1.7. REVISION OF BID SPECIFICATION

1.7.1. At All Rights are reserved to revise or amend the RFP document released on the website, prior to time specified in time schedule for main e-RFP preparation. Any further revisions, amendments or time extensions shall be communicated to all be displayed on website: https://mahatenders.gov.in and https://mahapreit.in/.

1.7.2. The amendment shall be part of the RFP Documents and will be notified by publication in the MAHAPREIT website as well

as maha tender website and will be binding on the prospective Bidders.

1.7.3. All the intending bidders are advised to keep a close watch on the website of MAHAPREIT and mahatender in their own interest.

1.8. BID SECURITY/ EARNEST MONEY DEPOSIT (EMD)

1.8.1. The Bidder shall furnish, as part of its bid, a bid security as specified in bid document. The bid security must be submitted in the form provided at Annexure-9 in the bidding documents.

1.8.2. All Bidders shall pay entire E.M.D. and payment shall be made through the e-payment gateway/uploading payment receipts. No Exemption is given.

1.9. INSURANCE

1.9.1. The Bidder / lead member shall bear the responsibility to arrange the insurance for evacuation and transmission infrastructure along with major components of the project. This insurance encompassing all the probable risks associated with the proposed Transmission infrastructure.

1.9.2. All the expenses in relation to such insurance of the project will have to be borne by the Bidder for the contract period, as per clause no. 12 in contract agreement.

1.10. TRACK RECORD

1.10.1. The Bidder shall have the good track record and shall not have been blacklisted/Banned for the participation in tender issued by the entity, government/ semi government organization in any country as on date of submission of bid. The Bidder shall submit an affidavit to that effect. MAHAPREIT, may reject the bid, if such affidavit is not furnished or contact may be terminated if any information found incorrect at any later stage.

1.11. PROJECT DEVELOPMENT COMPETENCE

1.11.1. The Bidder shall submit declaration of proposed vendors for material and equipment along with their credentials and supporting documents for all the items.

1.11.2. The Bidder shall also submit the list of technical personnel who will be deployed for the block of along with their technical qualifications and experience in Evacuation and Transmission Infrastructure field & Civil works.

1.11.3. The details of the consultants / in house capabilities to be deployed for design, engineering, installations and supervision shall be submitted to MAHAPREIT prior to start of the work.

1.11.4. Sub-Contractors/Vendors: Details and list of the sub-Contractor/Vendors along with details of experience and technical qualification will have to be submitted to MAHAPREIT before engagement of sub-Contractors/Vendors. Details of O&M agency to be submitted during bid submission.

1.12. EXCLUSIVITY

1.12.1. The Bidder can either submit the bid in his individual capacity or in Consortium /JV with another partner. The Consortium / JV partners shall not be more than three and shall declare the lead member.

1.12.2. The partners in the Bidding Consortium/ JV shall not separately participate as independent Bidders or as members of any other Consortium /JV in this Bidding process. All bids in contravention of this shall be rejected.

1.13. RIGHT TO ACCEPT/ REJECT

Tenders from Bidders will be admitted to the procedure provided that none of the following reasons for exclusion apply:

1.13.1. The Bidder is a state-controlled company in the partner country that is not legally or economically independent, or that is not subject to commercial law, or that is a public authority dependent on the contracting agency or the project executing agency or the recipient of the loan/financing amount;

1.13.2. The Bidder or individual members of the Bidder's staff or a sub-Bidder has economic links or family ties with personnel of the contracting agency who are involved in preparing the tender documents, awarding the contract or supervising the execution of the contract, insofar as the conflict of interests could not be resolved to MAHAPREIT's satisfaction in advance of the contract award and execution phase;

1.13.3. The Bidder is or was involved as a consultant in the preparation or implementation of the project. The same applies to an enterprise or an individual that is closely connected to the Bidder under a company group or a similar business link, or to several enterprises or individuals associated correspondingly. (exception: ln BOT projects or turnkey projects a participation of future suppliers or manufacturers may even be desirable);

1.13.4. The Bidder or individual members of the Bidder's staff or a sub-Bidder are not or were not during the last 12 months prior to publication of the invitation to tender indirectly or directly linked to the project in question through employment as a staff member or advisor to the contracting agency, and are not or were not able in this connection to influence the award of the contract for services, or the Bidder is not or was not otherwise able to influence the award of the contract for

services.

1.13.5. MAHAPREIT reserves the right to reject any or all of the responses to NIT or cancel the NIT or annul the bidding process for any project at any stage without assigning any reasons whatsoever and without thereby any liability.

1.13.6. The bid document is prepared considering the CVC guidelines. However, in case of any deviation in the terms and conditions of this bid document then the CVC guidelines shall be preferred.

*******END OF SECTION********

SECTION – II

INSTRUCTIONS TO BIDDERS (ITB)

Section –II: Instructions to Bidders

Contents

2.1. PROFILE

2.1.1. MNRE, New Delhi has rolled out the scheme of Solar Park to fulfil the ambitious target of setting 100 GW Solar Plants in India. Also, Govt. of Maharashtra has announced the State Renewable Energy Policy 2020 to set up 17360 MW renewable energy projects in Maharashtra, out of which 10000 MW is projected from solar energy.

2.1.2. The Mahatma Phule Backward Class Development Corporation Ltd is set up by the Govt. of Maharashtra as on 10th July 1978 for the economic upliftment of scheduled Castes and Nav- Buddha's MPBCDC LTD is known for its pioneering &innovative welfare- oriented programs & schemes for the backward class communities.

2.1.3. Mahatma Phule Renewable Energy and Infrastructure Technology Ltd. (MAHAPREIT) a subsidiary company of Mahatma Phule Backward Class Development Corporation Ltd is incorporated under the Company's Act 2013 (18 of 2013) on 12/04/2021.

2.1.4. Green Energy Initiative of MAHAPREIT: -

i) **MAHAPREIT has planned to develop 2550 MW Solar Projects in the state of Maharashtra.**

ii) Govt. of Maharashtra vide GR No. SS-2016/C.No.354/Energy-7 dtd.14th June 2017 has announced **Mukhyamantri Saur Krishi Vahini Yojana. (MSKVY)** for development of distributed Solar Project of 2 MW to 10 MW capacity to be set up within a periphery of 5 KM from Substation with a view to provide solar energy to the farmers during daytime. As per the policy, both MSEDCL as well as Mahagenco have been entrusted the work of implementation of the scheme to set up small distributed solar project adjacent to Substation. These solar projects are to be developed by the Solar Developer or Farmers or Group of Farmers on Private / Govt Land. In case of private land suitable lease agreement is to be done at the specified amount of lease rent per acre per year. The evacuation arrangement from Solar plant to Substation is to be done by Solar Developer.

iii) MAHAGENCO has offered 100 MW solar project to MAHAPREIT under MSKVY with land availability and issued LoI to MAHAPREIT for implementation of 100 MW projects in Northern & Western Maharashtra under MSKVY.

iv) MAHAPREIT has signed an agreement with HPCL, Pune Municipal Corporation for development of Renewable Energy Projects. In the similar line, the agreement is being signed with another public Sector undertaking Indian Oil Corporation shortly. Earlier, MAHAPREIT has also signed the MoU with Global Energy Alliance for People & Planet (GEAPP) for development of Solar Projects under MSKVY Scheme of GoM and PM-KUSUM Scheme of GoI. Considering these requirement, MAHAPREIT Proposed to develop 2550 MW Solar Park / Projects in Maharashtra.

2.1.5. LOCATION & APPROACH

Tender for Land Development and Power Evacuation works with 33KW substation for 3 MW Solar Power Project on land at Kelapur, Taluka Wardha, District Wardha for National Cancer Institute Nagpur, which includes land cutting & filling, removal of shrubs, trees, bushes etc., & providing of internal roads and drainage with Power Evacuation & Transmission Infrastructure up to Inter Connection Point of STU.

Note: Before submission of bid bidders must visit the site for assessments of work and accordingly submit the bid

2.2. ELIGIBLE BIDDERS

2.2.1. The Bidding process is on open tender basis to all eligible Bidders from within India who meet the Eligibility Criteria as mentioned in the tender.

2.3. GENERAL INSTRUCTIONS

2.3.1. The Bidder shall be deemed to have carefully examined the terms and conditions, procedures, Specifications, Forms and Formats, Annexures/ schedules, Attachments etc. in this Bid Document and also to have satisfied himself as to the nature and character of the plant and equipment to be supplied and installed under the Contract, the proposed Solar Power System(s), site conditions and all relevant matters & details. The Bidders shall also be deemed to have carefully examined the terms & conditions, specification etc. bidders are hereby cautioned that the e-RFP containing any deviation from the contractual terms and conditions and other requirements and CONDITIONAL e-RFQ shall be rejected

2.3.2. Though adequate care has been taken while preparing the Bid Document, the Bidder shall satisfy himself that the document is complete in all respects. It is Bidder's responsibility to satisfy itself that the information/documents are adequate and that there is no conflict between various documents/stipulations. No dispute or claims be entertained on this account. Bid preparation is the responsibility of the Bidder and no relief or consideration will be given for errors and omissions. The post-qualification process is applicable for e-RFP and Ratesquoted shall be Non-Negotiable

2.3.3. Bids shall be evaluated based on the information/ documents submitted in the Bid. Hence, Bidder should ensure that all information listed under this Bid Documents to be submitted with the bid has been attached /enclosed in appropriate

envelopes. Failure to furnish relevant information and documentary evidences as stipulated in the Bid Document or submission of a Bid that is not substantially responsive to the Bid Document in all respects shall be liable to be rejected

2.3.4. Bidders may note that the successful Bidder selected by MAHAPREIT based on this NIT, shall carryout Civil works like land development, Chain link fencing, Internal roads etc with Power Evacuation & Transmission arrangement for to set up Solar Projects in compliance with the provisions of the Bid Document.

2.3.5. The specification provided with this Bid Document outlines the functional requirement. The Bidder must submit the Bid based upon their own design, meeting the functional requirements as specified in the specifications.

2.3.6. Prospective Bidder acknowledges and agrees that response to the NIT is purely voluntary action on their part and for any expenditure on this account by them, MAHAPREIT will have no obligation or liability to the Bidders in the event of cancellation of NIT.

2.3.7. While the Employer has invited this NIT and has requested Bidders to submit their Bids, the Employer shall always be at the liberty to withdraw this NIT at any time before issue of LOA to the successful Bidder by MAHAPREIT.

2.3.8. Completed documents can be submitted on the on the following Web address: https://mahatenders.gov.in/ Incomplete Schedules /Forms without necessary details and enclosures are liable to be rejected. The language for submission of document shall be English. The enclosed Annexure shall be filled in completely and wherever no applicable it should be written as Not Applicable. The person signing the document submission on behalf of the Applicant shall enclose Power of Attorney duly authorized and notarized for the same. Financial data should be given in Indian Rupees only. All the pages of this document and Annexure should be signed and corrections should be counter signed by the authorized signatory. No over writing is permitted.

2.3.9. MAHAPREIT reserves the right to cross-check and confirm the information details furnished by the applicants in the document by making suitable communication with the concern authorities. From 15th August 2024 application fees of Rs 500 per bid shall be charged from the bidders by the Government of Maharashtra.For online payment-related issues, kindly send an email with the Bank Reference Number to this email ID merchant@sbi.co.in for clarifications.

2.3.10. **MAHAPREIT reserves the right to annul the Tender Document process, or to accept or reject any or all the proposals in whole or part at any time without assigning any reasons and without incurring any liability to the affected Bidder(s) or any obligation to inform the affected Bidder(s) of the grounds for such decision**.

The document in complete in any respect or without supporting documents will be treated as non-responsive and is liable for rejection. Bidders have one well established office along with experienced staff in the applied state.

To view-Tender Document, Notice, Detailed Time Schedule, Tender Document for any Tender and subsequently purchase the Tender Document and its supporting documents, kindly visit following e-Tendering website of Government of Maharashtra: https://mahatenders.gov.in

Bidders should enroll themselves in https://mahatenders.gov.in (https://mahatenders.gov.in/nicgep/app?component=%24WebHomeBorder.%24WebRightMenu.%24DirectLink&page=Home&service=direct&session=T)

Bidder should have Class-3 Digital Signature for the submission of Bids.

To purchase a Class 3 digital signature online in India, you can visit websites like eMudhra, ID Sign, or Signyourdoc, which offer various options for individuals and organizations, including signing-only, encryption, and combo certificates with different validity periods. https://emudhradigital.com/

1. For new bidders pls go through below video link for more details of enrollment https://www.youtube.com/watch?v=JzU117fCSTk

2. If bidder facing Digital sign issue at the time enrollment or after login - https://www.youtube.com/watch?v=njbZRuh-koM&list=PL2kwg9QSaSkpCp1ItGgi4b5BNhTwNOLNo or https://www.youtube.com/watch?v=Z85aG4LpqtY

3. To search **MAHAPREIT** tenders Select **Organisation** as **"Social Justic and Special Assistance**" Under its **Sub-Department** as **"MAHATMA PHULE RENEWABLE ENERGY & INFRASTRUCTURE TECHNOLOGY".**

4. For new bidders kindly go through the **Bidders Manual Kit**

https://mahatenders.gov.in/nicgep/app?page=BiddersManualKitsservice=page particularly **Registration of Bidders** document.

5. For FAQ's pls go through
https://mahatenders.gov.in/nicgep/app?page=FAQFrontEnd&service=page

6. For EMD and Tender fees payments Bidders who are required Internet banking facility only (No Debit/ Credit card, UPI or any other payment option is allowed.

7. For paying EMD and Tender Fees through Net Banking using other banks (**Other than SBI Bank**) we are requested to make online payment **four days in advance**.
8. From 15th August 2024 application fees of **Rs 500** per bid shall be charged from the bidders by Government of Maharashtra.

9. For **online Payment related issues**, kindly send an email with Bank Reference Number to this email ID **merchant@sbi.co.in** for clarifications.

10. For any technical related queries please call at **24 x 7 Help Desk Numbers** as below 120-4001, 0120-4001 005, 0120-4493395
International Bidders are requested to prefix 91 as country code

11. **E_Mail Support**

For any Issues or Clarifications relating to the published tenders, bidders are requested to contact the respective Tender Inviting Authority **Technical** - support-eproc@nic.in

2.4. COST OF BIDDING

The Bidder shall bear all costs associated with the preparation and submission of the bids. In no case, MAHAPREIT shall be responsible for these costs regardless of the conduct or outcome of the bidding process.

2.5. THE BID DOCUMENT

2.5.1. Notice Inviting Tender (NIT)/Bid Document comprises of the documents listed below

- Section-I : Notice Inviting Tender (NIT)
- Section-II: Instructions to Bidders (ITB)
- Section-III: Conditions of Contract (CC)
- Section-IV: Technical Specifications (TS)
- Section-V: Bid Response Sheets (BRS) & Annexures (BRS & Annexure)

2.5.2. The Bidder is expected to examine all instructions, forms, terms, specifications, and other information in the bid documents. Failure to furnish requisite information as per the bid documents or submission of a bid not substantially responsive to the bid documents in every respect will be at the Bidder's risk and may result in rejection of its bid.

2.6. BIDDERS' QUERIES/CLARIFICATIONS

2.6.1. Bidders may submit their queries/clarifications regarding the Bid Document, if any, in writing either by email or post and it must be received to Tender Inviting Authority well in advance.

2.6.2. MAHAPREIT shall not be obliged to respond to any request for clarification received to Tender Inviting Authority. Further, the mere request for clarification from the Bidders shall not be a ground for seeking extension in the deadline for submission of bids. Employer's response (including an explanation of the query but not identification of its source) will be uploaded on portal, where the Bidder can see clarification/reply to query/ amendment to the Bid Documents, if any.

2.7. AMENDMENTS OF BID DOCUMENT

2.7.1. At any time prior to the deadline for submission of Bids, MAHAPREIT may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder(s), modify the Bid Document by issuing Addenda and shall be available only on following websites:
https://mahatenders.gov.in No press note will be released in this regard.

2.7.2. All such Addenda shall be integral part of Bid Document. The amendments to the bid documents will be binding on the prospective Bidders and the notification of the amendment communicated through portal, shall be deemed to be construed that such amendment(s) to the bid documents have been taken into account by the Bidder in its bid/proposal.

2.7.3. In order to allow prospective Bidders reasonable time in which to take the amendment into account in preparing their Bids, MAHAPREIT, at its discretion, may extend the deadline for the submission and opening of Bid.

2.7.4. BID SECURITY/EARNEST MONEY DEPOSIT (EMD)

2.7.5. The Bidder shall furnish, as part of its bid, a bid security as specified in section- I of NIT. The bid security shall be in the amount stipulated in the NIT. The bid security must be submitted in the form provided at Annexure-9 in the bidding documents.

2.7.6. The bid security shall be in the form of a bank guarantee from any Indian nationalized bank/scheduled bank in India in Indian Rupees (INR).

2.7.7. The format of the bank guarantee shall be in accordance with the form of bid security included in the bidding document. Bid securities shall remain valid for a period of 180 days, beyond the original validity period of the bid or beyond any period of extension subsequently requested as per mentioned tender.

2.7.8. Any bid not accompanied by an acceptable bid security, shall be rejected by the Owner as being nonresponsive.

2.7.9. The Bid Security of the unsuccessful Bidders, shall be returned within 30(thirty) days from the date of issue of 'Letter of Award' to the successful Bidder."

2.7.10. No interest shall be payable on the amount of security.

2.7.11. The bid security of the successful Bidder will be returned when the Bidder has signed the Contract Agreement and has furnished the required CPSG.

2.7.12. The Bid submitted by a Bidder shall be treated invalid and the Bid security shall be forfeited:

a. If the Bidder withdraws/ modify his bid within the bid validity specified in the Bid Specification.

OR

b. The successful Bidder fails to submit performance guarantee and/ or to execute contract agreement within the prescribed period in accordance with the instructions to the Bidder.

OR

c. If the Bidder being the successful Bidder fails to furnish the acceptance of Letter of Award, within the specified time limit.

OR

d. If the Bidder gives any wrong / false information /documents in the bid for making the bid qualified (eligible).

OR

e. Bidder fails to take over the project land in specified time limit.

The EMD of the Successful Bidder shall be returned/released after,

a) When the Bidder has signed the Contract Agreement pursuant to Instruction of Bidders

AND

b) Acceptance of LOA by the Bidders

AND

c) The submission of Bank Guarantee towards Contract performance by the Bidder and on acceptance of the same by the MAHAPREIT.

2.7.13. Unsuccessful Bidder's EMD will be discharged/returned/released as promptly as possible but not later than one month beyond the validity of the bid.

2.8. LANGUAGE OF BID

2.8.1. The bid prepared by the Bidder and all correspondence and documents related to the bid exchanged by the Bidder and the Employer shall be written in English language. Supporting documents and printed literature furnished by the Bidders with their bids may be in another language, provided they are accompanied with a certificate of the authorized translator certifying therein an accurate translation of the relevant passages in the above stated language, in which case, for the purposes of interpretation of the Bid, the translation shall prevail. Failure to comply with this may disqualify a bid.

2.9. BID CURRENCY

2.9.1. The Bidder shall quote all prices in Indian Rupees only. No other currency shall be acceptable.

2.10. PERIOD OF BID VALIDITY

2.10.1. Bids shall remain valid for a period of 180 days after the closing date prescribed by MAHAPREIT for the submission of bids. A bid valid for a shorter period shall be rejected by the Employer as being non-responsive.

2.10.2. In exceptional circumstances, prior to expiry of the original bid validity period, MAHAPREIT may request the Bidders to extend the period of bid validity for a specified additional period. The request and the responses thereto shall be made in

writing or by e-mail/fax. A Bidder agreeing to the request will not be required or permitted to modify its bid. If Bidder refuse to extend the period of bid validity, the bid of such Bidder shall not be considered for further evaluation.

2.11. FORMAT AND SIGNING OF BID

2.11.1. The Bid submitted by the Bidder must be digitally signed by the person duly authorized to sign on behalf of the Bidder. Each page of the Bid should be numbered and properly signed. Contents and pages should be indicated in the index page. The name of the person signing the bid should also be typed or printed below the signature.

2.11.2. Bid must be signed with the legal name of the Corporation /Company by the person authorized to sign the bid on behalf of such Corporation / Company in the matter.

2.11.3. Satisfactory evidence of authority of the person signing on behalf of the Bidder shall be furnished on non-judicial stamp paper of an appropriate value with the hard copy of bid in the form of a Power of Attorney, duly notarized by a Notary Public along with copy of Board Resolution (in original or notary attested copy), indicating that the person signing the bid has the authority to sign the bid and that the bid is binding upon the Bidder during the full period of its validity.

2.11.4. Each Bid shall contain no overwriting, alterations, omissions, or additions, unless such corrections are initiated by the person or persons signing the Bid. Corrections if any shall only be made by scoring out the cancelled portion, writing the correction, initiating and dating it by the person or persons signing the Bid.

2.11.5. The Bidder shall provide all the information sought under this NIT. MAHAPREIT will evaluate only those Bids that are received in the required formats and complete in all respects.

2.11.6. The Bid must be typed or written in indelible ink or digitally sign and sealed at each page by the Bidder with his usual signature before submission.

2.11.7. The Bidder's name stated on the proposal shall be the legal exact name of the firm.

2.11.8. Bids not conforming to the above requirement of signing even after the clarifications sought in this regard by the Employer, shall be **disqualified.**

2.11.9. The Bidders are required to submit a **"No Deviation Certificate"** as per the Attachment No-6 of Section V: Bid Response Sheets (BRS) and Annexures to this bid document. The Bidder also undertakes that in the event the Project is awarded to it, during execution of the Project, it shall not seek to alter any agreed contractual terms, conditions and specifications.

2.12. DOCUMENTS COMPRISING THE BID

2.12.1. The Bid submitted by the Bidder shall comprise the following documents:

i. Bid Form duly completed and signed by the Bidder, together with all Attachments identified in Clause No 2.15.2 below.

ii. Price Bid to be submitted online in the given format by the Bidder.

2.12.2. Bidder shall submit with its bid the following attachments:

i. Attachment-1: Power of Attorney

A power of attorney, as per Clause No 2.12.3, indicating that the person(s) signing the Bid has the authority to sign the Bid and that the Bid is binding upon the Bidder during the full period of its validity in accordance with Clause No 2.11.

ii. Attachment-2: Submission of GST Details

Bidders have to submit the GST details of their company at Attachment- 2 of Section-V: BRS & Annexures of this Bid Document.

iii. Attachment-3: Bid Security/Earnest Money Deposit requirement

Bidder shall submit the Bid security/EMD requirement as per format specified at

iv. Annexure-9 of Section-V: BRS & Annexures of this Bid Document.

v. Attachment-4: Pre- Contract Integrity Pact

Integrity Pact duly signed between Employer and the Bidder in accordance with Clause No 2.31.

vi. Attachment-5: Declaration regarding Blacklisting

vii. Attachment-6: No Deviation Certificate

The Bidders shall submit a ***"No Deviation Certificate"*** to the updated bidding document in accordance with Clause No 2.13 of this Bid Document

viii. Attachment-7: Electronic Fund Transfer (EFT) details of the Bidder.

ix. Attachment-8: Technical Criteria

Bidder shall submit the technical data in the prescribed format along with scanned copy of all the supporting documents to demonstrate fulfillment of the eligibility criteria as per Clause No. 1.2.1 of this Bid Document.

x. Attachment-9: Financial Criteria

Bidder shall submit the financial data in the prescribed format along with scanned copy of all the supporting documents to demonstrate fulfillment of the eligibility criteria as per Clause No. 1. 2.2 of this Bid Document.

xi. Attachment -10: Time Schedule

Bidder shall submit the detailed activity wise Time schedule (L1 Schedule) for each unit for which the Bidder is seeking qualification in the form of PERT Chart covering all aspects like ordering, site preparation, Supply, erection, installation, testing & commissioning, etc. along with the bid.

xii. **Attachment-11: List of Vendors/sub-contractors proposed to be engaged.**
xiii. **Attachmnt-12: Mandatory Information to be submitted by the Bidder.**
xiv. **Attachment -13: Undertaking regarding restrictions imposed by the GoI.**
xv. **Attachment- 14: Deleted**
xvi. **Attachment -15: Estimated Bill of Quantities**
xvii. **Attachment-16: Schedule of Tools & Tackles for Erection, Testing, Commissioning and O&M for each unit for which the Bidder is seeking qualification.**
xviii. **Attachment no 17: Deleted**
xix. **Attachment no. 18 : Price bid (to be submitted in price bid envelop only).**

2.12.3. The bid should be serially numbered and properly indexed mentioning all constituents of bid including any enclosures/attachments etc. and their location page numbers in the bid. Failure to submit the bid in systematic manner as above may result oversight of any important information provided by the Bidder for which MAHAPREIT shall not be responsible.

2.13. BID PRICE AND BID CURRENCY

2.13.1. The Bidder shall quote his lowest prices inclusive of all taxes & duties for for Land Development and Power Evacuation Works with a 33 kV switchyard at the National Cancer Institute, Nagpur, for a total capacity of 3 MW. The scope includes land cutting and filling, clearing of shrubs, trees, and bushes, construction of peripheral and internal roads, development of water arrangements such as borewells/wells, and provision of a security cabin, along with complete Power Evacuation and Transmission Infrastructure up to the State Transmission Utility (STU) Interconnection Point for establishing Solar Projects in the State of Maharashtra. Any rise in the taxes and fees will not be paid extra subjected to the Cl. No. 1.36 of Variations in section III of General terms & conditions.

2.13.2. The Contract Price shall be paid as per the milestone payments as prescribed in the RfP.

2.13.3. Income Tax and Profession Tax, any other tax as per Statutory Provisions of Govt. of India and Maharashtra State shall be deducted by the Employer from each invoice. A certificate in this regard shall be provided by the Employer.

2.13.4. The Bidder shall quote fixed price inclusive of all the applicable taxes providing the tax breakup. The bid price shall be the sum total of lump sum price quoted by the Bidder for entire scope of work. The Bidder shall indicate the Bid Price in Indian Rupees only.

2.14. SUBMISSION OF BID

2.14.1. The Bid shall be submitted online in two parts as stated hereunder in this Clause. Submission of the online bid by any other means shall not be accepted by the Employer in any circumstances.

2.14.2. Authorized signatory holding Power of Attorney with his digital signature on behalf the Bidder shall upload Bid Response Sheets and requisite documents along with copies of certificates/supporting documents on the website https://www.bharat- electronictender.com before the last date & time set for submission of bids in the following two envelopes.

Envelope - I: Techno-commercial Bid
Envelope- II: Price Bid

2.14.3. **Envelope – I: Techno-Commercial Bid**

Techno- commercial Bid shall contain the following:

a) Bid Form duly completed and signed by the Bidder
b) Attachments No. 1 to 20 as mentioned in Clause No 2.14.2 together with all supporting documents, which the Bidder wishes to submit as part of his Techno- commercial Bid.
c) Scanned copies of Technical Particulars in accordance with the Section-IV: Technical specifications (TS).

Techno-Commercial Bid should not contain any price content entry. In case, the Techno-Commercial Bid is found to contain any price content, such bid shall be out rightly rejected.

2.14.4. **Envelope-II: Price Bid**

a) Bidders are required to submit unit wise prices in the price bid (in electronic form of financial part of ETS portal) in conformity with the Bid Document for the capacity in which Bidder is seeking qualification. In case, Bidder omits to submit the prices for the unit(s) in which the Bidder is interested, then such Bidder will not be considered for further evaluation of that unit.
b) The Bidder has to quote the total price (excluding GST) for project in electronic form as per clause 2.15.4 above

considering price break up sheet uploaded by Employer in excel as well as EBV price as per clause 2.22 in the electronic form of ETS portal only. Only Prices quoted in electronic form of financial part shall be considered for evaluation.

2.14.5. Further, after the issuance of LOA, successful Bidder(s) shall submit item wise price break up for all the items to Employer in the prescribed format / price break up sheet uploaded by Employer in excel after conclusion of the bid process. No price break up sheet in excel shall be uploaded with price bid. No material relating to any technical matters shall be included in the Price Bid.

2.15. SUBMISSION OF COPIES OF CERTIFICATES/ DOCUMENTARY PROOF

2.15.1. Bidders are required to submit/upload copies of all supporting certificates/ documentary evidences as well as the other requisite documents required as per bid document. Non- submission of copies of requisite certificates/documents may render the bid non- responsive, and shall be liable for rejection.

2.16. DEADLINE FOR SUBMISSION OF BIDS

2.16.1. The complete Bids must be uploaded on the MAHAPREIT's e-tendering portal and in the event of the specified date for submission of bids being declared a holiday for MAHAPREIT, the bids will be received up to the appointed time on the next working day. However, the date and time for online submission of the Bids shall continue to be the date and time specified or amendment notified in this regard.

2.16.2. MAHAPREIT may, at its discretion, extend this deadline for submission of bids by amending the bid documents, in which case, all rights and obligations of MAHAPREIT and Bidders will thereafter be subject to the deadline as extended.

2.17. LATE BIDS

2.17.1. Online submission of the Bid will not be permitted on the portal after expiry of submission time and the Bidder shall not be permitted to submit the same by any other mode.

2.18. MODIFICATION AND WITHDRAWAL OF BIDS

2.18.1. In case any clarifications are sought by the Employer after opening of Techno- commercial Bids, then the replies of the Bidder should be restricted to the clarifications sought. Any Bidder who modifies its Bid (including a modification which has the effect of altering the value of its Price Bid) after opening of Bid without specific reference by the Employer, shall render the Bid liable to be rejected without notice and without further reference to the Bidder and its EMD is liable to be forfeited.

2.18.2. No Bid may be withdrawn in the interval between the bid due date and the expiration of the validity period of the Bid. Withdrawal or unsolicited modification of a Bid during this interval shall result in the Bidder's forfeiture of its EMD.

2.19. BID OPENING

2.19.1. The Employer shall open, examine and evaluate the Bids in accordance with the provisions set out in this bid document. In case of the unscheduled holiday being declared on the prescribed opening day of the Bid, the next working day shall be treated as the scheduled day of opening of the Bid.

2.19.2. The Techno-commercial and price bids will be opened at the time and date set for opening for bids in the presence of representatives who may wish to be present.

2.19.3. The price bid of techno-commercially qualified Bidders shall be opened in the presence of representative of such Bidders who wish to be present at a subsequent date and time for which the separate intimation will be sent to the techno commercially qualified Bidder.

2.19.4. Bidder's representatives shall sign a register only as proof of their attendance.

2.19.5. Bidder's names, bid prices, the presence or absence of bid security/EMD and other such details as the Employer, at its discretion, may consider appropriate, will be announced at the opening of Bids.

2.19.6. Bids not covering the entire scope shall be treated as incomplete and hence may be rejected.

2.19.7. The Employer further, reserves the right to reject any bid, which is not submitted according to the instructions stipulated above.

2.20. CLARIFICATION ON BIDS

2.20.1. During the evaluation of the Bids, MAHAPREIT may at its discretion seek clarification(s)/ confirmation(s) from the Bidders on their bids. The request for such clarification(s)/ confirmation(s) shall be in writing and no change in the price or substance of the bid shall be sought, offered or permitted. The Bidder will be required to submit their clarification within the time as specified by the Employer in the request for clarification letter. If the clarification(s)/ confirmation(s) sought from the Bidder are not received in stipulated period, then evaluation will be done based on available data in their bids and non-submission of requisite supporting document/data by the Bidder may lead to non-responsive/rejection/disqualification of bids. No clarification at the initiative of the Bidder after submission of bids shall be entertained.

2.20.2. Submission of such clarification(s)/confirmation(s)/historical information shall not be considered as material deviations. However, this information can only be submitted by the Bidder, if MAHAPREIT requests for such information,

2.21. BID EVALUATION CRITERIA AND SELECTION PROCEDURE OF THE BIDDER

Parties who intend to participate in this e-tender and meets the eligibility criteria as mentioned at Clause No 1.2 of this Bid Document will have to submit their Techno- commercial Bid and Price Bid ("Offer") in accordance with the procedures, terms and conditions as mentioned in this Bid Document. Eligible Bidders complying the requirements of the Bid document shall be evaluated in two stage process as herein below:

2.21.1. **Techno-Commercial Bid Evaluation**

i. At this stage, bids of each Bidder will be evaluated on the basis of terms & conditions of NIT viz. bid security (EMD), the correctness & validity of required undertaking/agreements/Board resolutions/experience certificates/technical data sheets /annexure/ certificates/financial documents/ performance certificates/vendor credentials documents etc. submitted by Bidder under prescribed format according to the NIT, Bidders financial & technical capability as per qualifying requirement, confirmation of technical specifications of the major equipments offered by the Bidders.

ii. MAHAPREIT will appoint a Technical Bid Evaluation Committee at its own discretion for evaluation of technical bids submitted by the Bidders.

iii. Bidder whose bid found complete in all respect and in line with NIT terms & conditions without any deviations and which offers the required equipments/material along with guaranteed electrical energy generation as per the technical specifications mentioned in the NIT will be considered technically qualified Bidder.

2.21.2. **Price Bid Evaluation**

Only after the Technical Evaluation has been finalized, the price bids of those Bidders that qualified during the evaluation of the technical bids shall be opened.

2.21.3. MAHAPREIT reserves the right to reject any or all bids or cancel/withdraw the Notice Inviting Tender (NIT) and annul the process at any time prior to the issuance of letter of Award to the Successful Bidder without assigning any reason whatsoever and shall bear no liability whatsoever consequent upon such a decision.

2.22. CORRECTION OF ERRORS

2.22.1. The errors /discrepancies in respect of the specified amount in Bid Response Sheets for an individual item and/or sub-item and/or in the sub-total of a Bid Response Sheet and/or in the Grand total of a Bid Response Sheet and/or in the lump sum price of the package either due to discrepancy between figures and words and/or simple arithmetical error while adding and/or multiplying and /or due to wrong extension of unit rates etc. the error will be rectified and computed by MAHAPREIT Ltd. as per the following method:

2.22.2. In case of discrepancy between figures and words, the value specified in the words will be considered for computation.

2.22.3. Firstly, the unit rates / percentage rate in words will be considered for computation.

2.22.4. In case unit rates / percentage rates are not indicated in words then unit rates indicated in figure will be considered and will be used for deriving the amount from the quantities specified in the bid documents.

2.22.5. In case error is due to variation of quantities, the quantities as specified in the bid documents will be considered and multiplied by the quoted unit rates to obtain the amount.

2.22.6. The items for which Bidder does not quote his price i.e., indicated as 'NIL'/'Zero', leaves the rate / amount columns blank, puts a (-) mark or indicates 'NA' etc. in the rate / amount column; cost shall be considered as "Inclusive" for bid evaluation for such items.

2.22.7. After computation of the amounts as above, the values as computed shall be considered for evaluation. If the Bidder does not accept the above consideration,his bid will be rejected and the bid security/EMD may be forfeited.

2.23. INFLUENCING THE EMPLOYER/ CONSULTANT

2.23.1. No Bidder shall contact the Employer/Consultant (if appointed by the Employer) on any matter relating to its bid, from the time of the opening of bids to the time the contract is awarded.

2.23.2. Any effort by a Bidder to influence the Employer/Consultant in the Employer's bid evaluation, bid comparison or contract award decisions may result in rejection of the Bidder's bid.

2.24. EMPLOYER'S RIGHT TO ACCEPT / REJECT ANY BID

2.24.1. The Employer reserves the right to accept or reject any bid, and to annul the bid processand reject all bids at any time prior to award of contract, without thereby incurring any liability to the affected Bidder or Bidders or any obligation to inform the affected Bidderor Bidders of the grounds for the Employer's action.

2.25. LETTER OF AWARD (LOA)

2.25.1. MAHAPREIT will issue separate Letter of Awards (LOA) to the Bidder whose bid has been determined to be substantially responsive. The successful Bidder shall be required to confirm its unequivocal acceptance within seven (07) days from

the date of issue of Letter of Award. The LOA will constitute the formation of the contract and will be considered for all purposes of execution of contract provisions till such time the signing of the Contract Agreement.

2.26. SIGNING OF THE CONTRACT AGREEMENT

2.26.1. The Contract Agreement(s) will be signed in two (2) originals on non-judicial stamp paper of appropriate value within 28 (twenty-Eight) days of issue of Letter of Awards and the Contractor shall be provided with one signed copy of original Agreement and the other will be retained by the Employer.

2.27. CORRUPT OR FRAUDULENT PRACTICES

2.27.1. The Employer requires the Bidders to observe the highest standard of ethics during the procurement and execution of the Contract. In pursuance of this policy, the Employer defines, for the purposes of this provision, the terms set forth below as follows:

i. **"Corrupt practice"** means the offering, giving, receiving or soliciting of anything of value to influence the action of a public 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 the owner, and includes collusive practice among Bidders (prior to or after bidsubmission) designed to establish bid prices at artificial non-competitive levels and to deprive the owner of the benefits of free and open competition;

iii. **"Collusive practice"** means a scheme or arrangement between two or more Bidders, with or without the knowledge of the Owner, designed to establish bid prices at artificial, non-competitive levels.

iv. **"Coercive Practice"** means harming or threatening to harm, directly or indirectly, persons or thereto influence their participation in the procurement process or affect the execution of a contract.

2.27.2. The Employer will reject a proposal for award if it determines that the Bidder recommended for award has engaged in Corrupt or Fraudulent or Collusive or Coercive practices in competing for the contract in question.

2.27.3. The Employer will declare a Bidder ineligible, either indefinitely or for a stated period of time, to be awarded a contract if it at any time determines that the firm has engaged in Corrupt or Fraudulent or Collusive or Coercive practices in competing for, or in executing, a contract of the Employer.

2.28. IMMUNITY TO GOVERNMENT OF INDIA AND GOVERNMNT OF MAHARASHTRA.

2.28.1. It is expressly understood and agreed to by and between the Bidder and MAHAPREIT that MAHAPREIT is entering into this contract solely on its own behalf and not on behalf of any other person or entity. In particular, it is expressly understood and agreed that the Government of India or Government of Maharashtra is not a party to this contract and has no liabilities, obligations or rights hereunder.

2.28.2. It is expressly understood and agreed that MAHAPREIT is an independent legal entity with power and authority to enter into contracts solely in its own behalf under the applicable laws of India or Government of Maharashtra and general principles of contract law. The Bidder expressly agrees, acknowledges and understands that MAHAPREIT is not an agent, representative or delegate of the Govt. of India. It is further understood and agreed that the Govt. of India or Government of Maharashtra is not and shall not be liable for any acts, omissions and commissions, breaches or other wrong arising out of the contract. Accordingly, the Bidder hereby expressly waives, release and forgoes any and all actions or claims including cross, impleader, claims or counter claims against the Govt. of India or Government of Maharashtra arising out of this contract and covenants not to sue the Govt. of India or Government of Maharashtra as to any manner, claim cause of action or thing what so ever arising of or under this Agreement.

2.29. ADOPTION OF INTEGRITY PACT

2.29.1. In order to ensure transparency, equality and competitiveness in its procurement, MAHAPREIT has decided to adopt Integrity Pact. The Integrity Pact (IP) envisages an agreement (As per Proforma annexed at **Attachment-4**) between the prospective Bidders/ contractors and the Employer committing the person(s)/ official(s) of both the parties, not to exercise any corrupt influence on any aspect of the contract.

2.29.2. Further, this Integrity Pact Programme is also applicable to subsidiaries of MAHAPREIT or MPBCDC LTD.

2.29.3. All Applicants shall enter into an Integrity Pact (to be executed on plain paper) with the Employer at the time of submission of their Bids. Only those Bidders who have entered into Integrity Pact with the Employer shall be eligible to participate in the bidding process. Entering into Integrity Pact as per Performa provided in the Section Forms & Procedure is a basic qualifying requirement.

2.29.4. The Integrity Pact digitally signed on behalf of the Employer is provided as Attachment- 4 in Section-V: BRS & Annexures. The Integrity Pact shall be downloaded, printed and signed by the Applicant and the hard copy shall be submitted.

2.29.5. Successful Bidder shall submit duly executed Integrity pact on Non-Judicial Stamp paper of appropriate value prior to signing of Contract Agreement.

2.29.6. In order to deal with any grievance (s)/ dispute (s) and to oversee implementation and effectiveness of the Integrity Pact Programme pertaining to this Notice Inviting Tender, Bidder(s) may refer the same to Independent external monitor (IEMs).

2.29.7. All pages of the Integrity Pact duly signed by authorized representatives of the Bidder and duly witnessed shall be submitted along with their Bid in accordance with NIT. Failure to submit the original signed copy of the Integrity Pact by the Bidder shall leadto outright rejection of the Bid.

2.30. RESTRICTIONS IMPOSED BY GOVT OF INDIA

2.30.1. Any Bidder from a country which shares a land border with India will be eligible to bid in this tender only if the Bidder is registered with the Competent Authority specified in Annexure-I of Ministry of Finance, Government of India order no F. No. 6/18/2019-PPD dated 23.07.2020 and various amendment/clarification issued in this regard. The Bidders for the purpose of compliance and its procedure for registration from Competent Authority etc. The Bidder has to submit the undertaking as per **Attachment -16** regarding compliance of above-mentioned order. In case the undertaking given by the Bidder whose tender has been accepted by the Employer is found false at the later stage, this would be a ground for immediate termination and further legal action shallbe taken in accordance with law.

2.31. INELIGIBILTY FOR PARTICIPATION IN RE-TENDER

2.31.1. If a Bidder after opening of tenders where EMD is NIL/not applicable or exempted for such Bidders as per policy guidelines of Government of India, withdraws or modifies its offer within the validity period of the offer, then such Bidder shall be treated as ineligible for future tenders issued by MAHAPREIT for the period of 01 year from the date of default as notified by MAHAPREIT.

2.31.2. If a Bidder after having been issued the Letter of Award of the package where EMD is NIL/Not applicable or exempted for Bidder as per policy guidelines of Govt. of India, either does not accept the Letter of Award within stipulated time or does not sign the Contract Agreement or does not submit an acceptable Contract Performance Security as stipulated in CC clause 3.48, then such Bidder shall be treated as ineligible for future tenders issued by MAHAPREIT for the period of 01 year from the date of default as notified by MAHAPREIT.

*******END OF SECTION********

SECTION – III

CONDITIONS OF CONTRACT (CC)

3.1. DEFINITIONS

3.2. GENERAL USAGE OF LANGUAGE AND INTERPRETATION

3.2.1. Conditions of Contract shall be read in conjunction with the Notice Inviting Tender (NIT), Instructions to Bidders (ITB), Technical Specifications, Quality Assurance plan and any other document forming part of this contract, wherever the context so requires.

3.2.2. Words imparting 'persons' shall include firms, companies, Employers and association or body of individuals, whether incorporated or not.

3.2.3. Any error in description, quantity in Bill of Quantities or any omission there from shall not vitiate the Contract or release the Contractor from execution of the whole or any part of the Works comprised therein according to drawings and Specifications or from any of his obligations under the Contract.

3.2.4. **Headings, Marginal notes and captions**: The Headings, Marginal Notes and Captions to any Clause of the Contract shall not limit, alter or affect the meaning of the specifications or conditions of bidding. These have been provided for the facility of references only and shall not affect or control the construction of the Contract

3.2.5. **Language and measurement**: All documents pertaining to the Contract, including specifications, schedules, notices, correspondences, operation and maintenance instructions, drawings or any other documents shall be written in English language. The Metric system of measurement shall be used exclusively in the Contract.

3.2.6. Unless otherwise specifically mentioned, the references of Clause No given under various clauses shall be deemed to be pertaining to this Bid Documents.

3.3. CONTRACT DOCUMENT

3.3.1. The term Contract document shall mean and include the following (including subsequent amendments, if any) which shall essentially form an integral part of the contract.

i. Contract Agreement
ii. Letter of Award (LoA), duly accepted by bidder together with its amendments, if any
iii. Bid Document including subsequent amendments/clarifications, if any.
iv. Contractor's Bid Proposal along with Bid Response Sheets, Annexure etc.
v. Final Approved Quality Assurance Plans for manufacturing and site/field activities for all major/critical items
vi. Integrity Pact
vii. Activity Chart/Project Schedule (Detailed schedule of activities breakup under major activities, sub-activities and sub-sub-activities with specified timeline and highlighted critical activities which may impact the project timeline.
viii. Manpower Chart
ix. Any other documents forming part of the Contract

3.3.2. All the aforesaid documents shall form an integral part of the Contract, in so far as the same or any part thereof conform to the Bid Documents and what has been specifically agreed to by the Employer and brought out in Letter of Award issued by the Employer. Any matter inconsistent therewith, contrary or repugnant thereto or any deviation taken by the Contractor in its Bid but not agreed to specifically by the Employer in its Letter of Award shall be deemed to have been withdrawn by the Contractor.

3.3.3. In case of any contradiction in any of the terms & conditions to the extent that the two provisions cannot co-exist, the following shall prevail in order of precedence.

a) Letter of Award
b) Conditions of Contract
c) Technical Specifications
d) Instructions to Bidder
e) Any other document

3.4. USE OF CONTRACT DOCUMENTS AND INFORMATION

3.4.1. The Contractor, without the Employer's prior written consent, shall not disclose the Contract, or any provisions thereof, or any specification, plan, drawing, pattern, sample or information furnished by or on behalf of the Employer in connection therewith, to any person other than the person employed by the Contractor in the performance of the Contract. Disclosures to any such employed person shall be made in confidence and shall extend only as far as may be necessary for purposes of such performance.

3.4.2. The Contractor, without the Employer's prior written consent, shall not make use of any document or information enumerated in various Contract documents except for the purpose of performing the Contract.

3.4.3. Any document, other than the Contract itself, enumerated in various Contract documents, shall remain the property of the Employer and shall be returned (in all copies) to the Employer on completion of the Contractor's performance under the contact if so, required by the Employer.

3.4.4. The Contractor shall not communicate or use in advertising, publicity, sales releases or in any other medium, photographs and other reproductions of the works under the Contract or descriptions of the site, dimensions, quantity, quality or other information concerning the works unless prior written permission has been obtained from the Employer.

3.5. SCOPE OF THE CONTRACT

i. The contractor's obligations under the contract shall **Tender for Land Development and Power Evacuation works with 33KW substation for 3 MW Solar Power Project on land at Kelapur, Taluka Wardha, District Wardha for National Cancer Institute Nagpur, which includes land cutting & filling, removal of shrubs, trees, bushes etc., & providing of internal roads and drainage with Power Evacuation & Transmission Infrastructure up to Inter Connection Point of STU.**All Works to be carried out under this contract shall be in accordance with the requirements, conditions, appendices etc. given in Technical Requirements/ Specifications (Section-IV) together with those stated in other Sections/Sub-sections of this Bid Documents, which shall be considered as a part of this volume completely as if bound herewith. Further, all the works to be carried out under the scope should also comply all the technical requirements.

ii. The Contractor shall, unless specifically excluded in the Contract, perform all such work and/or supply all such items and materials not specifically mentioned in the Contract but that can be reasonably inferred from the Contract as being required for attaining Completion of the Facilities as if such work and/or items and materials were expressly mentioned in the Contract.

iii. The detailed Scope of Work is given in the Technical Specifications (Section- IV)

3.6. CONSTRUCTION OF THE CONTRACT

3.6.1. Notwithstanding anything stated elsewhere in the Bid Documents, the Contract to be awarded shall be for entire capacity on a single source responsibility. However, MAHAPREIT may issue the Notice to Proceed on each land parcel.

3.6.2. A breach in the performance of any of the above contracts mentioned at Clause No 3.6.1 above shall be considered as a breach in performance of the other contracts, which shall confer a right to MAHAPREIT to terminate the other contracts also at the risk and cost of the Contractor without prejudice to other rights, MAHAPREIT may have as per terms & conditions of respective order.

3.6.3. Entire responsibility with regard Tender for Power Evacuation work with 33KW bay for National Cancer Institute Nagpur with the capacity of 3 MW which includes providing of internal roads, Prefab security cabin etc.. with Power Evacuation & Transmission Infrastructure up to Inter Connection Point of STU upto 132/33KV Deoli substation of MSETCL of village Kelapur district Wardha for setting up Solar Project in the State of Maharashtra.**,** will remain with Contractor irrespective of the modality of the contracts and the Contractor shall coordinate all activities for smooth and timely completion of the project in such a manner, as if there has been no split in the scope.

3.7. AMENDMENT

No amendment or other variation of the Contract shall be effective unless it is in writing, is dated, expressly refers to the Contract, and is signed by a duly authorized representative of each party hereto.

3.8. POWER TO VARY OR OMIT WORK

i. No alterations, amendments, omissions, additions, subtractions, or variations of the work (hereinafter referred to as "variation") under the contract shall be made by the Contractor except as directed by the Employer.

ii. If any suggested variations would, in the opinion of the Contractor, if carried out prevent it from fulfilling any of its obligations or guarantees under the Contract, it shall notify the Employer thereof in writing and the Employer shall decide forthwith whether or not the same shall be carried out and if Employer confirms its instruction, the Contractor shall carryout the work as per instructions.

iii. The differences in cost, if any, occasioned by such variations, shall be added to or deducted from the Contract Price, as the case may be

iv. In the event of the Employer requiring any variations, reasonable and proper notice shall be given to the Contractor as well, to enable it to make arrangements accordingly, and in cases where goods or materials are already prepared/procured, or any designs, drawings or patterns made or work done that require to be altered, a reasonable sum in respect thereof shall be allowed by the Employer.

v. In every case in which the contractor shall receive instructions from the Employer for carrying out any work, which either then or later, will in the opinion of the Contractor involve a claim for additional payment, the Contractor shall as soon as reasonably possible after the receipt of such instructions, inform in writing the Employer of such claim for additional payment.

3.9. CONTRACT AGREEMENT

3.9.1. The Contract Agreement(s) will be signed in two (2) originals on non-judicial stamp paper of appropriate value within twenty-eight (28) days of issue of Letters of Award. Signing of the Contract Agreement will be done at office of MAHAPREIT. The Contract Agreement shall be signed only after Contractor provides Contract performance cum Security Guarantee (CPSG) to the Employer as per information specified in Clause 3.48 of the Bid Documents and completes other activities which are required to be carried out by the contractor prior to signing of Contract Agreement as per the Bid Documents. The format for Contract Agreement is specified in Annexure 1 of Section-V: Bid Response Sheets and Annexures.

3.9.2. Unless and until a formal Contract Agreement is prepared and executed, Letter of Award, in conjunction with the Bid Documents will constitute a binding Contract. After signing of the Contract Agreement, 15 (Fifteen) true hard copies of the same shall have to be made by the Contractor and shall be submitted to the Employer along with the soft copy within 30 days from the date of signing of the Contract Agreement.

3.10. ASSIGNMENT AND SUBLETTING OF CONTRACT

3.10.1. The Contractor shall not assign, sublet or sub-contract any part of the contract without prior specific written approval by the Employer other than to those vendors/sub-contractors already identified/qualified/approved in the contract. Such Assignment/sub-letting/sub- contracting under the contract as above without prior written approval of Employer shall be void. Such approval by the Employer for any of the Subcontractors shall not relieve the Contractor from any of its obligations, duties or responsibilities under the Contract. The contractor shall notify the Employer in writing of all sub contracts awarded under the contract, if not already specified in his bid.

3.10.2. In case, the Contractor engages any Sub-Contractor to carry out a part of the work, the Sub- Contractor should have requisite Government License as applicable for carrying out such part of the work.

3.11. CONTRACTOR'S VENDORS /SUPPLIERS/ SUBCONTRACTORS

3.11.1. Save for any material/minor details/parts of the equipment/services for which origin/makes are identified in the contract, the Contractor shall not procure equipment/services or part thereof for incorporation in his supplies/services from other vendors/suppliers/sub-contractors without applying in writing to the Engineer-in-Charge for his examination and getting his prior written approval thereon. Any change in the vendors/suppliers/sub-contractors already identified in the contract as per Section (IV)-Technical Specification shall also be subject to approval by the Engineer-in-Charge. If the Contractor finds it necessary to have vendors/suppliers/sub- contractors for additional items/materials or to change the already identified (in the contract) vendors/suppliers/subcontractors, the relevant application to the Engineer-in-Charge shall include the experience list of such equipment vendors/suppliers/sub-contractors of such materials/equipment. Any approval by the Employer for any of the vendors/suppliers/sub- contractors of the Contractor shall not relieve the Contractor from any obligation, or responsibility under the contract.

3.11.2. The contractor shall furnish, for such bought out items/components, a copy of the Purchase Order without price details but together with detailed purchase specifications, quality plans and delivery conditions to the Employer.

3.12. RESPONSIBILITIES OF THE CONTRACTOR

3.12.1. The Contractor shall design, procure/ manufacture (including associated purchases and/or subcontracting), install, commission and complete the Facilities, carry out the Operational Acceptance tests and Operation and Maintenance (O&M) of the entire power evacuation and transmission system for the prescribed period with due care and diligence in accordance with the Contract provisions.

3.12.2. The Contractor confirms that it has entered into this Contract on the basis of a proper examination of the data relating to the Facilities provided by the Employer and assessed by himself at the site location, and on the basis of information that the Contractor could have obtained from a visual inspection of the Site (if access thereto was available) and of other data readily available to it only after proper due diligence relating to the Facilities prior to bid submission. The Contractor acknowledges that any failure to acquaint itself with all such data and information shall not relieve its responsibility for properly estimating the difficulty or cost of successfully performing the Facilities.

3.12.3. The Contractor shall acquire, on behalf of Employer, in the name of the Employer, all permits, approvals and/or licenses from all local, state or national government authorities or public service undertakings in the country/state where the Site is located that are necessary for the setting up of the plant mentioned under the Contract. In this regard, any document required from Employer shall be intimated by the Contractor to the Employer at least 21 days prior to submission. Contractor has to ensure safe keeping of the documents and diligent use.

3.12.4. The Contractor shall acquire in its name all permits, approvals and/or licenses from all local, state or national government authorities or public service authorities in the country where the Site is located that are necessary for the Performance of the Contract, including, but not limited to, the right of way for the access to site and laying down of HT cables/lines as applicable, and entry permits for all imported Contractor's Equipment. The Contractor shall acquire all other permits,

approvals and/or licenses that are not the responsibility of the Employer under Clause No 3.13 of this Bid Documents hereof and that are necessary for the Performance of the Contract.

3.12.5. Contractor shall also seek for any exemption applicable for the project as per the orders released from GOI time to time. In this regard, contractor shall be responsible to take all necessary certificates as a proof of exemptions on behalf of Employer. However, all the documents required from Employer, as needed for the process, will be provided by Employer. The demand of such documents shall be made to the Employer at least 10 days in advance.

3.12.6. Similarly, contractor shall consider of all the Input Tax Credits (ITC) available to the Facilities or during Operation and Maintenance Contract while quoting its prices as per the provisions of GST Act.

3.12.7. The Contractor shall comply with all laws in force at the place, where the Facilities are installed and where the Installation Services are carried out. The laws will include all national, provincial, municipal or other laws that affect the Performance of the Contract and binding upon the Contractor. The Contractor shall indemnify and hold harmless the Employer from and against any and all liabilities, damages, claims, fines, penalties and expenses of whatever nature arising or resulting from the violation of such laws by the Contractor or its personnel, including the Subcontractors and their personnel.

3.12.8. Unless otherwise specified in the Contract or agreed upon by the Employer and the Contractor, the Contractor shall provide/ deploy sufficient, properly qualified personnel for Erection, Testing, Commissioning and Operation & Maintenance of the Power Evacuation & Transmission System; shall supply and make available all raw materials, spares, other materials and facilities; and shall perform all work and services of whatsoever nature, to properly carry out Commissioning, Performance Guarantee Tests/Operational Acceptance Test, all in accordance with the provisions of the bid document within the time specified under Clause No. 3.17 (Timelines) hereof and in the manner thereupon specified in the bid document.

3.12.9. The Contractor shall be responsible for the Operation & Maintenance of the Facilities after Commissioning and related operation of the plant till the COD is achieved before proper hand over of the site by contractor.

3.12.10. On completion of the work, the Contractor shall inform the Engineer-in-Charge in writing about the Date of Completion and shall request him for a Completion Certificate. No such certificate will be given nor shall the work be considered as completed, until the Contractor has removed from the premises on which the work has been executed, all surplus materials and rubbish, which he may have had possession/generated for the purpose of the execution thereof and the area is fully cleared to the satisfaction of the Engineer-in- Charge and if the Contractor fails to do so on or before the date fixed for completion of the work, the Engineer-in-Charge may do so and may sell such scaffolding and materials as have not been removed by the Contractor and the expenditure so incurred shall be recovered from the Contractor's outstanding dues. The Contractor shall have no claim in respect of any such scaffolding or surplus materials as aforesaid.

3.13. RESPONSIBILITIES OF THE EMPLOYER

3.13.1. The Employer shall provide all information and/or data to be supplied by the Employer as described in the Scope of Works and Supply by the Employer to the Contractor, except when otherwise expressly stated in the Contract.

3.13.2. If requested by the Contractor and upon Employer's sole discretion, the Employer shall assist the Contractor in obtaining in a timely and expeditious manner all permits, approvals and/or licenses necessary for the execution of the Contract from all local state or national government authorities or public service undertakings that such authorities or undertakings required for the Contractor.

3.14. PATENT RIGHTS AND ROYALTIES

3.14.1. The Contractor shall at all-time indemnify MAHAPREIT against all claims which may be made in respect of the plant and machinery for infringement of any right protected by patent, trademark, intellectual Property rights and / or industrial design rights arising from use of the Goods or any part thereof in India and / or other country. Provided always that in the event of any claim in respect of any alleged breach of patent, trademark, intellectual Property rights and / or industrial design rights arising from use of the Goods or any part thereof in India and / or other country made against MAHAPREIT, the same shall be notified to the Contractor and Contractor shall at his own cost either settle such dispute amicably or conduct any litigation that may arise there from.

3.15. EFFECTIVENESS OF THE CONTRACT

3.15.1. The contract shall be considered as having come into force from the date of issuance of LOA by MAHAPREIT to the Contractor unless otherwise provided in the Letter of Award

3.16. TIME - THE ESSENCE OF CONTRACT

3.16.1. The time and the date of successful completion of scope of work as stipulated in the contract by MAHAPREIT without or with modifications, if any, and so incorporated in the Letter of Award, shall be deemed to be the essence of the contract for all intents and purposes. The Contractor shall so organize his resources and perform his work as to complete it not later than the date agreed to in the Contract.

3.17. TIMELINES

3.17.1. All works envisaged in this Contract shall be completed within the time limit specified at Clause No 3.17.2 below with or without modifications, if any, and so incorporated in the Letter of Award and no deviation shall be allowed whatsoever. The Contractor shall so organize his resources and perform his work as to complete it not later than the date agreed to in the timeline schedule. The time for completion of his works contracted for, shall be reckoned from the date of issue of the Letter of Award (LoA) by the Employer unless otherwise provided in the LoA. The Contractor's liability for delay in completion shall be as stipulated under the Clause No. 3.49 (Liquidated Damages for EPC Contract) of Section III: Conditions of Contract of this bid document.

3.17.2. Entire scope of supply and works under this contract shall be completed within the period of **90 days from the date of acceptance of LOA by the bidder**

3.17.3. The contractor shall provide the detailed program of supply in details and delivery schedule along with work schedule thereto. Strict adherence and guaranteed delivery schedule mentioned in terms and conditions shall be the essence of the contract and delivery schedule must be maintained. Any deviation from the submitted schedule must be mutually discussed by the Parties and shall be at discretion of MAHAPREIT to allow, if deem it fit.

3.18. PROTECTION AT WORK

3.18.1. The contractor shall have total responsibility for protecting his work till it is finally taken over by the Employer. No claim will be entertained by the employer for any damage or loss to the contractors' works and the contractor shall be responsible for the complete restoration of the damaged work to its original condition to comply with the specifications and drawings. Should any such damage to the contractor's work occur because of other party not under his supervision or control, the contractor shall make his claim directly with the party concerned. If disagreement or conflict or dispute develops between the contractor and the other party or parties concerned regarding the responsibility for damage to the contractor's works, the same shall be resolved amicably by the Contractor with other party. The contractor shall not cause any delay in the repair of such damaged work because of any delay in the resolution of such disputes. The contractor shall proceed to repair the work immediately and no cause thereof will be assigned pending resolution of such dispute.

3.19. PROTECTION OF PROPERTY AND CONTRACTOR'S LIABILITY

3.19.1. The contractor shall be responsible for any damage resulting from his operations. The Contractor shall also be responsible for protection of all persons including members of public and employees of the Employer and the employees of other contractors and sub- contractors and all public and private property including structures, building, other plants and equipment and utilities either above or below the ground.

3.19.2. The contractor will ensure provision of necessary safety equipment such as barriers, sign-boards, warning lights and alarms, etc. to provide adequate protection to persons and property inside the plant premises. The contractor shall be responsible to give reasonable notice to the Employer and the employers of public or private property and utilities when such property and utilities are likely to get damaged or injured during the performance of his work and shall make all necessary arrangements with such Employers, related to removal and/or replacement or protection of such property and utilities.

3.20. WORK EXECUTION

3.20.1. All the work shall be executed in strict conformity with the provisions of the contract documents, explanatory detailed drawings, specifications and instructions by the Engineer-in-Charge whether mentioned in the contract or not. The contractor shall be responsible for ensuring that works are executed in the most substantial, proper and workman like manner using the quality materials and labour, throughout the job Completion in strict accordance with the specifications and to the entire satisfaction of the Engineer-in-Charge. The Contractor shall, at all times during execution of the Contract, carry out the work with such labour force and equipment as are sufficient to complete it within the specified completion period. Engineer-in-Charge reserves the right to direct the Contractor to supplement the construction plant capacity, change sequence and method of operation and/or increase the manpower employed to execute the contract, if it is felt that the same is not sufficient achieving the completion target of the work as per schedule, without any extra cost to the Employer.

3.20.2. **Representative of Employer:** - Within seven (07) days of the signing of Contract Agreement, the Employer shall appoint and notify the Contractor in writing of the name of the Engineer-in-Charge (herein after referred as EIC). The Employer may from time to time appoint some other person as the Engineer- in-Charge in place of the person previously so appointed, and shall give a notice of the name of such other person to the Contractor without delay. The Engineer-in-Charge shall represent and act for the Employer at all times during the currency of the Contract. All notices, instructions, orders, certificates, approvals and all other communications under the Contract shall be given by the Engineer-in-Charge, except as herein otherwise provided in the contract.

3.20.3. **Representative of Contractor: -**

a) Within seven (07) days of issue of LOA by the Employer, the Contractor shall appoint a senior level executive as the "Project Manager" for Project Planning, execution and management who shall be the single point of contact for all issues related to design & engineering, dispatch, civil, architectural and structural works, erection, testing commissioning and Performance Guarantee Test of the equipment. The appointed Project Manager should have experience in independently handling at least one similar project.

b) From the commencement of installation of the Facilities at the Site until completion of facilities, the Contractor shall appoint a suitable person as the "Construction Manager". The Construction Manager shall supervise all work done at the Site by the Contractor and shall be present at the Site throughout the execution of the Project for proper Performance of the Contract. Whenever the Construction Manager is absent from the Site, a suitable person shall be appointed by the contractor to act as his or her deputy.

c) During the execution of the contract, such persons appointed by the Contractor shall report to the Engineer-in-Charge or his authorized representative, for smooth execution and timely completion of the work.

3.20.4. **CONSTRUCTION POWER & WATER SUPPLY**

i. The Contractor has to arrange Construction Power and water at the site for construction & operation purpose at its own cost. (Bidders should visit the site and assess the availability of water and power for construction)

ii. Cost of electricity required during construction shall be payable by the Contractor. For construction, temporary connection for construction power from DISCOM shall be arranged by the Contractor as per applicable tariff.

3.20.5. **CONTRACTOR'S OFFICE AT SITE**

a) The Contractor shall also provide and maintain an office at the site for the Contractor's staff and the Employer's Officials. Such office shall be open at all reasonable hours to receive instructions, notices or other communications.

b) The Contractor shall deploy sufficient number of qualified engineers and staff to carry out the work and they shall be available at work sites during execution of the project. The Contractor shall provide and deploy only qualified engineers, staff and technical personnel who are skilled and experienced in their respective area of specialization and supervisory staff who are competent to adequately supervise the work at hand. The Contractor shall supply to the Employer a chart showing the proposed organization to be established by the Contractor for carrying out work on the Facilities before signing of contract agreement. The chart shall include the identities of the key personnel to be deployed for execution of works. The Contractor shall promptly inform the Employer inwriting of any revision or alteration of such an organization chart. The contractor shall ensure the deployment of manpower as finalized above.

3.21. CONTRACTOR'S FIELD OPERATION

a) The contractor shall keep the EIC informed in advance regarding his field activity plans and schedules for carrying out each part of the work. Any review of such plan or scheduleor method of work by the EIC shall not relieve the contractor of any of his responsibilitiestowards the field activities. Such reviews shall also not be considered as an assumption of any risk or liability by the EIC or the Employer or any of his representatives and no claim of the contractor will be entertained because of the failure or inefficiency of any such plan or schedule or method of work reviewed. The contractor shall be solely responsible for the safety, adequacy and efficiency of plant and equipment and his erection methods.

b) The contractor shall have the complete responsibility for the conditions of the work site including the safety of all persons employed by him or his Sub-contractor(s) and all the properties under his custody during the performance of the Contract. The liability shall continue till the completion of the contract and shall not be limited to normal working hours

3.21.1. **Working Hours**

The contractor shall ensure working hours at site as per the applicable statutory regulation(s)/government guidelines in the state where the project is located. Shift working at 2 or 3 shifts per day may also become necessary to complete the work on time and the bidders should take this aspect into consideration for formulating his rates for Price Bid. No extra claims will be entertained by the Employer on this account. The contract shall provide display boards showing progress and labour strength at work site, as directed by the Engineer-in-Charge.

3.21.2. **Discipline of Workmen**

The contractor shall adhere to the disciplinary procedure set out by the EIC in respect of his employees and workmen at site. The EIC shall be at liberty to object to the presence of any representative or employees of the contractor at the site, if in the opinion of the EIC, such employee has misconducted himself or be incompetent or negligent or otherwise undesirable, in such situation the contractor shall debar such person objected to and substitute him by another employee.

3.21.3. **Program of Performance**

a) The bidders shall be required to submit activity wise Project Master Schedule (PMS) (i.e., L1 schedule) considering the

completion period as specified in Clause No 3.17 of Section-III: Conditions of Contract & any other dates and periods specified in this Bid document along with the bid. The above Project Master Schedule (PMS) (i.e., L1 schedule) and the key milestone dates will be discussed and finalized with the successful bidder, if required before the issue of Letter of Award.

b) Within twenty one (21) days after the date of issue of Letter of Award by the Employer, the contractor shall prepare and submit Project Co-ordination Schedule (PCS) (i.e. L2 Schedule), made in the form of PERT Network (based on Critical Path Methodology (CPM)) and showing the sequence in which it proposes to design, manufacture, procurement/supply, transport, assemble, install and commission as well as starting date and completion date of different components/activity, each milestone achievement dates pertaining to project further exploded based on the Project Master Schedule (PMS) mutually agreed by the Employer and Contractor and make the presentation to EIC of their proposed PCS and organizational resources, equipment, machineries, manpower to be deployed for timely completion of the project. This Project Co-ordination Schedule (PCS) shall form part of the contract.

c) PCS shall also define month-wise schedule of project components/milestones. The Contractor shall update and revise the program as and when appropriate or when required by the Employer, but without modification in the Times for Completion given in the contract and any extension granted in accordance with provisions of contract and shall submit all such revisions to the EIC.

d) Monthly Progress Review Meeting (MPRM) to be held on 26th of every month or in case 26th day being holiday, on the next working day. The month wise activity schedule shall be reviewed and detailed working schedule (week wise) for the next month shall be drawn up by the contractor jointly with the Engineer-in-Charge or his authorized representative in the MPRM).

e) Weekly Progress Review Meeting (WPRM) shall be held by EIC or its authorized representative, wherever possible at the works, wherein week wise schedule as finalized in MPRM shall be reviewed. In case of any lapses in the target, it shall be updated in Weekly Progress Review Meeting (WRPM).

f) The contractor shall be mandatorily required to attend the WPRM & MPRM. Minutes of WPRM/MPRM shall be recorded in triplicate and shall inter alia include the Weekly/Monthly Program as updated, progress of work vis-à-vis agreed schedule, inputs to be provided by Employer, delays, if any and recovery program, specific hindrances to work and work instructions by Employer. These Minutes of Meeting (MoM) shall be jointly signed by the EIC or his authorized representative and the Contractor and one copy of the signed MoM shall be handed over to the Contractor.

g) The contractor shall scrupulously adhere to these targets/ Schedules by deploying adequate personnel, construction tools and tackles, materials of his scope of supply in good time to achieve the targets/ schedules.

h) In all matters concerning the extents of targets set out in above schedules and the degree of achievement, the decision of the Engineer-in-Charge will be final and binding on the contractor

3.21.4. **Emergency Work**

If, by reason of an emergency arising in connection with and during the execution of the Contract, any protective or remedial work is necessary as a matter of urgency to prevent damage to the Facilities, the Contractor shall immediately carry out such work.

3.22. RIGHT OF WAY AND FACILITIES

3.22.1. The Contractor will be responsible for ROW during construction and O&M for access to the 'Project Site'. Minor work related with creation of proper access to the 'Project' shall be done by the contractor.

3.23. SITE HINDRANCE REGISTER

3.23.1. The Contractor shall maintain a register at the site office and record hindrance, if any, in the site register to be duly signed by Contractor or his authorized representative and verified by EIC or his authorized representative.

3.24. WORK AND SAFETY REGULATIONS

3.24.1. The contractor shall ensure proper safety of all the workmen, materials, plant and equipment belonging to him or to the Employer or to others, working at or near the site. The contractor shall also be responsible for provisions of all safety notices and safety equipment required both by the relevant legislations and the EIC as he may deem necessary.

3.24.2. All equipment used in construction and erection by contractor shall meet Indian/ International Standards and where such standards do not exist, the contractor shall ensure these to be absolutely safe. All equipment shall be strictly operated and maintained by the contractor in accordance with manufacturer's operation manual and safety instructions and as per Guidelines/Rules of MAHAPREIT Ltd. in this regard.

3.24.3. The contractor shall provide suitable safety equipment of prescribed standard to all employee and workmen according to the need or as may be directed by EIC who will also have right to examine this safety equipment to determine their suitability, reliability, acceptability and adaptability.

3.24.4. The contractor shall provide safe working conditions to all workmen and employees at the site including safe means of access, railings, stairs, ladders, scaffoldings etc. The Scaffoldings shall be erected under the control and supervisions of an experienced and competent person. For erection, good and standard quality of material only shall be used by the contractor.

3.24.5. The EIC shall have the right at his sole discretion to stop the work, if in his opinion the work is being done in such a way that it may cause accidents and endanger the safety of the persons and/or property, and/or equipment. In such cases, the contractor shall be informed in writing about the nature of hazards and possible injury/accident and he shall comply to remove short comings immediately.

3.24.6. The contractor shall not be entitled for any damages/compensation for stoppage of work due to safety reasons as provided in Clause No. 3.24.5 above and the period of such stoppage of work will not be taken as an extension of time for completion of work and will not be the ground for waiver of levy of liquidated damages.

3.24.7. The contractor shall follow and comply with all MAHAPREIT. Safety Rules and relevant provisions of applicable laws pertaining to the safety of workmen, employees, plant and equipment as may be prescribed from time to time without any demur, protest or content or reservation. In case of any inconformity between statutory requirement and MAHAPREIT Safety Rules, if any, referred above, the statutory requirement/provisions shall be binding on the contractor. MAHAPREIT shall provide safety manual to the successful Bidder.

3.25. ACCESS TO SITE AND WORKS ON SITE

No persons other than the Employer's representative, the contractor or his duly appointed representative, Sub-contractor(s) and workmen, shall be allowed to do work on the site, except by the special permission, in writing of the EIC or his representative.

3.26. PROGRESS REPORT

3.26.1. The Contractor shall monitor progress of all the activities specified in the work schedule/Timelines referred in Clause No 3.17, and submit the progress report to the Engineer- in Charge. The progress report shall be in a form acceptable to the Engineer- In Charge and shall include percentage completion achieved compared with the planned percentage completion for each activity, where any activity is behind the program, giving comments and likely consequences and stating the corrective action being taken and any such other information as required by the EIC.

3.26.2. The Contractor shall furnish, along with the progress report, photographs indicating various stages of civil, architectural, erection, testing and commissioning activities, each Photograph shall contain the date, the name of the Contractor and the title of the view taken

3.26.3. If at any time the Contractor's actual progress falls behind the schedule referring to in Clause No 3.17.2 (Timelines), or it becomes apparent that it will so fall behind, the Contractor shall, prepare and submit to the Engineer- In Charge a revised program, taking into account the prevailing circumstances, and shall notify the Engineer- In Charge of the steps being taken to expedite progress so as to attain Completion of the Facilities within the Time for Completion as mentioned under Clause No 3.17 (Timelines), any extension thereof entitled under Clause 3.61 (Time Extension), or any extended period as may otherwise be agreed upon between the Employer and the Contractor.

3.27. SPECIFICATIONS AND DRAWINGS

3.27.1. The Contractor shall execute the basic and detailed design and engineering work in compliance with the provisions of the Contract, or where not so specified, in accordance with good and sound engineering practice. The Contractor shall be responsible and shall pay for any alterations of the work for any discrepancies, errors or omissions in the specifications, drawings and other technical documents that it has prepared, whether such specifications, drawings and other documents have been approved/reviewed by the Engineer-in-Charge or not.

3.27.2. The materials, design and workmanship shall satisfy the applicable standards, specifications contained herein and codes referred to. Where the Contract Document stipulates requirements in addition to those contained in the standard codes and specifications, those additional requirements shall also be satisfied.

3.27.3. Three (03) prints of all relevant drawings along with soft copies of drawings in pdf in DVD/CD/USB drive as defined in the technical specifications, shall be submitted by the contractor. No extension in Contract completion time shall be allowed on account of the time consumed in submission and examination of defective drawings and re- submission of corrected drawings.

3.27.4. In addition to the drawings defined in the technical specification, the Contractor will furnish any other drawing, which, in his opinion, is necessarily required to describe the equipment in full details and interconnection thereof and any drawings which EIC may request.

3.27.5. These drawings, shall become the property of the Employer and shall not be departed from it in anyway, whatsoever, except with the written permission of the Engineer–in-Charge hereinafter provided.

3.27.6. The Contractor shall also furnish Five (05) bound sets of "as built" drawings and the list of all "as built" drawings bearing drawing numbers after commissioning, incorporating all site modifications/changes etc.

3.27.7. The Employer/EIC shall have the right to serve notice in writing to the Contractor on any grounds of objections, which he may have in respect of any drawings, equipment and workmanship which is in his opinion not in accordance with the contract. The Contractor shall give due consideration to such objections and shall either make modifications that may be

necessary to meet the said objections or shall inform in writing to the EIC giving reasons therein, that no modifications are necessary to comply with the contract. The Contractor has to satisfy the objection, otherwise, The Employer/EIC at its liberty may reject all or any component of plant or workmanship connected with such work.

3.28. APPROVAL / REVIEW OF DRAWINGS & DOCUMENTS

3.28.1. The Contractor shall prepare and furnish to the EIC the documents as per Contract Agreement for its approval or review. EIC shall review the documents furnished by the contractor and give the feedback or approval within 07 days from the date of submission of documents by the contractor. Any part of the Facilities covered by or related to the documents to be approved by the EIC shall be executed only after theEIC's approval thereof. Document furnished by the Contractor, shall not relieve the Contractor of any responsibility or liability imposed upon it by any provisions of the Contract.

3.29. PACKING, FORWARDING

3.29.1. The Contractor shall be responsible for securely protecting and packing the plant and equipment, taking special care for protruding parts and such other vulnerable parts as per prescribed standards enforced to withstand the journey and ensuring the safety of materials and also arrival of materials at destination in good and original condition for contemplated use, so as to avoid damage under normal conditions of transport, loading & unloading, handling and storage at site till the time of erection and such conditions as specified in the Contract. The Contractor shall be responsible for any loss or damage during transportation, handling and storage due to improper packing. Each bundle or package shall have the following marking on it:

i. The name and address of the consignee.
ii. The relevant marks, reference numbers etc., for identification.
iii. Directions for handling the materials

Each package shall also be accompanied with detailed packing list to facilitate checking of the contents at the destination

3.29.2. The Contractor shall also give all dispatch information concerning the weight, size and content of each package, including any other information which the Employer may require.

3.29.3. The Proof of dispatch three copies shall be mailed to the Engineer-in-Charge within three (03) days from the date of dispatch to enable the Employer to make progressive payment to the Contractor.

3.29.4. In case of imported equipment, the Contractor shall make shipping arrangements as per Government of India Guidelines. The Contractor shall, wherever applicable, pack all equipment, crate, preserve, make it seaworthy and fit for long storage in tropical climate in accordance with internationally accepted export practices and in such manner so as to protect it from damage and deterioration in transit by sea, rail and road, and during storage at the site till the time of erection. The Contractor shall be responsible for all damage due to improper packing. Customs clearance shall be the responsibility of the Contractor. The Contractor shall notify the Employer of the date of each shipment from the port of such shipment at the designated point of arrival. The Contractor shall give complete shipping information concerning the weight, size, content of each package including any information the Employer may require.

3.29.5. All demurrage, wharfage and other expenses incurred due to delayed clearance of the material and which are attributable to the Contractor and Sub-Contractor during transportation shall be to the account of the Contractor.

3.30. TRANSPORTATION

3.30.1. The Contractor shall at its own risk and expense transport all the Plant and Equipment and the Contractor's Equipment to the Site by the mode of transport that the Contractor judges most suitable under all the circumstances.

3.30.2. The Contractor shall notify the Employer/EIC the details of dispatch for every month from his works and the expected date of arrival at the site for the information of the Employer. The Contractor shall furnish the Employer/EIC with relevant shipping documents to be agreed upon between the parties.

3.30.3. The Contractor shall prepare detailed challan / packing list of all packages dispatched to site. The Contractor shall further be responsible for making all necessary arrangement for loading, unloading and other handling right from his work to and at the site.

3.30.4. In case the contractor decides to transport the goods by road within the Employer country, then such goods necessarily be transported through a registered common carrier as per "The Carriage by Road Rules 2011".

3.31. DELIVERY OF EQUIPMENT /MATERIALS

3.31.1. The Contractor shall deliver the equipment / materials at the place(s) and in the manner as specified in the Contract. The Contractor shall comply with all instructions that may be given by the Employer from time to time regarding transportation of the equipment/materials. The contractor shall, immediately after dispatch, provide delivery information to the Employer.

3.31.2. In case of any damage or loss occurred in transit, it shall be the liability of the Contractor to initiate or pursue the claim with the Insurance Company. He shall also take immediate steps to repair the damages or to replace the loss and damages as per the instruction of the Engineer-in- charge.

3.31.3. Property or title of the equipment / goods shall not pass to the Employer unless these are actually delivered at the designated Project without any damage.

3.31.4. The Employer shall not be responsible to the Contractor to secure/arrange/provide means of transport. Similarly, any road license and or permit, if necessary, shall be arranged by the Contractor. However, if any documentary assistance is necessary to facilitate transportation, these will be supplied to the Contractor to the extent possible.

3.31.5. No material shall be dispatched from the manufacturer's works before the same is accepted, subsequent to pre-dispatch final inspection including verification of records of all previous tests/inspections by the EIC/Authorized representative of Employer and duly authorized for dispatch by issuance of Material Dispatch Clearance Certificate (MDCC).

3.32. MATERIALS HANDLING AND STORAGE

3.32.1. All the equipment supplied under the contract and arriving at site shall be promptly received against indemnity bond, unloaded, transported and stored in the designated storage facilities arranged/constructed by the contractor. All the equipment shall be stored as per standard storage and preservation instructions etc. of the suppliers/manufacturers. The equipment stored shall be properly protected to prevent damage either to the equipment or to the floor where they are stored and also from theft, pilferages etc. The storage facilities shall also include enclosed storage space(s) of suitable size(s) and shall be weatherproof, with good ventilation and solid floors.

3.32.2. The following parts shall be stored inside enclosed storage space(s):

i. Bolts, pins, packing, tools, insulation materials, electrical parts with electrical devices attached, electric motors , instruments, welding material and equipment, all small parts and all parts of the plant which already have been finally painted.

ii. If large parts are stored in the open air, they shall be provided with weather resistant and fire-resistant covers. Electrical parts, which are not packed suitably and those so packed, but whose packing has been damaged shall be kept in suitable places from the moment of storage to the moment of installation.

3.32.3. Contractor shall be responsible for examining all the dispatches and notify the EIC immediately of any damage, shortage, discrepancy, etc. for the purpose of EIC's information only. The contractor shall also submit to the EIC every week a report detailing receipt of material at site, material issued for installation/erection, balance material at store. However, the contractor shall be solely responsible for any shortage or damage in transit, handling and/or in storage and erection of the equipment at the site. Any demurrage, wharfage and other such charges claimed by the transporters shall be to the account of the contractor.

3.32.4. All equipment shall be handled very carefully and shall be moved to the actual location at the appropriate time so as to avoid damage of such equipment at site.

3.32.5. **INDEMNITY BOND**

The contractor shall sign and submit Indemnity Bond(s) in the format as attached at Annexure 5 of the Bid Document and shall be obliged and shall remain absolutely responsible for the safe transit protection and custody of the Equipment of MAHAPREIT against all Contractor's risks whatsoever till the Equipment are duly used/erected and commissioned in accordance with the terms of the Contract till the same is taken over by EIC. Subsequent to commencement of Operation and Maintenance of the Plant, the contractor shall again sign and submit Indemnity Bond in the format as attached at Annexure-7 of the Bid Document.

3.32.6. The Contractor shall keep Employer harmless against any loss or damage that may be caused to the Equipment. The Contractor shall ensure that the Equipment shall be used exclusively for the performance /execution of the Contracts strictly in accordance with its terms and conditions and no part of the equipment shall be utilized for any other work or purpose whatsoever. The non- observance of the obligations under the Indemnity Bond by the Contractor shall inter- alia constitute a criminal breach of trust on the part of the Contractor for all intents and purposes including legal/penal consequences.

3.33. MATERIALS AND WORKMANSHIP

3.33.1. The Contractor shall also guarantee that the equipment and materials shall be new and of best quality workmanship and the materials shall have no defect in design and/or manufacture, and shall meet the requirements of the specification and shall be in all respects suited for purposes intended.

3.33.2. The Contractor shall guarantee, inter-alia, the following: -

a) Use of best quality and strength of materials
b) Satisfactory Performance during the period of operation
c) Achievement of Performance figures as specified for all parts under the severest condition of operation

3.33.3. Unless otherwise specified, they shall conform in all respect to the latest edition of the relevant IS codes specification wherever Indian specifications apply or IEC codes or equivalent internationally accepted standard.

3.33.4. The Contractor shall remedy, without any cost to the Employer, all defects in design materials and workmanship which may develop under normal use and which have been called to the attention of the Contractor prior to the expiry of the warranty period.

3.34. NO WAIVER OF RIGHTS

3.34.1. Subject to Clause No 3.34.2 below, no relaxation, forbearance, delay or indulgence by either party in enforcing any of the terms and conditions of the Contract or the granting of time by either party to the other shall prejudice, affect or restrict the rights of that party under the Contract, nor shall any waiver by either party of any breach of Contract operate as waiver of any subsequent or continuing breach of Contract.

3.34.2. Any waiver of a party's rights, powers or remedies under the Contract must be in writing, must be dated and signed by an authorized representative of the party granting such waiver, and must specify the right and the extent to which it is being waived.

3.35. INSPECTION AND TESTING

3.35.1. The Engineer-in-charge or his duly authorized representative and/or an external inspection agency acting on behalf of the Employer shall have access, at all reasonable time to inspect and examine the materials and workmanship of the plant / equipment during its manufacture, erection, shop assembly and testing and if part of the plant is being manufactured or assembled on another premises or works, the Contractor shall obtain for the Engineer-in-charge and his duly authorized representatives, permission to inspect it as if the works were manufactured or assembled on Contractor's own premises or works.

3.35.2. The Contractor shall give the written notice to Employer, for testing of any material being ready for inspection/testing at least 15 (Fifteen) days in advance from the date of actual inspection/testing at the premises of the Contractor or elsewhere. Such Inspection / testing shall be carried out to the Contractor's account except for the expenses of the representative of the Employer. However, the Employer at its own discretion may waive the inspection / testing in writing under very special circumstance. The Engineer-in- Charge or his representative (s), unless the inspection of the tests is in writing waived, shall attend such tests on the date of which the equipment is notified by the Contractor as being ready for test / inspection, failing which the Contractor may proceed with the tests which shall be deemed to have been made in the Employer's presence. The Contractor shall forthwith forward to the Engineer-in-charge duly certified copies of test results in quadruplicate, for approval of the Engineer-in-charge. However, waiver accorded by the EIC will not absolve the Contractor towards the execution of the Contract in conformity with the Contract Agreement

3.35.3. The Engineer-in-Charge shall, within 15 (Fifteen) days from the date of inspection as defined herein, give notice in writing to the Contractor, of any objection to any drawing, testing procedure and testing facility and all / or any equipment and workmanship which in his opinion is not in accordance with the Contract. The Contractor shall give due consideration to such objection and shall make the modifications that may be necessary to meet the said objection at no extra cost to the Employer.

3.35.4. When the factory tests have been completed at the Contractor's or Sub-Contractor's works, the Engineer-in-Charge shall issue a certificate to this effect within 15 (Fifteen) days after completion of tests. However, if the tests are not witnessed by the Engineer- in-Charge, the certificate shall be issued within 15 (Fifteen) days of receipt of the Contractor's test certificate by the Engineer- in-Charge only when the tests have been carried out as per relevant codes / standards. The completion of these tests or the issue of the certificate, shall not bind the Employer to accept the equipment, should it, on further tests after erection, be found not to comply with the Contract

3.35.5. In all cases where the Contract provides for inspection/ tests to be carried out, whether at the premises of the Contractor or of any Sub-Contractor, the Contractor/Sub- Contractor shall provide free of charges such items as labour, materials, electricity, fuel, water, stores, apparatus, instruments etc. as may reasonably be demanded by the Engineer-in-Charge or his authorized representative(s) to carry out efficiently such test / inspection of the plant / equipment in accordance with the Contract and shall give facilities to the EIC or to his authorized representative to accomplish testing. Charges for any special test(s), other than those specified in the Contract, if required, will be paid by the Employer. Rate(s) for such special test(s) shall be mutually discussed and agreed.

3.35.6. All inspection, measuring and test equipment used by contractor shall be calibrated periodically depending on its use and criticality of the test/measurement to be done. The Contractor shall maintain all the relevant records of periodic calibration and instrument identification, and shall produce the same for inspection by MAHAPREIT. Wherever asked specifically, the Contractor shall re- calibrate the measuring/test equipment in the presence of EIC.

3.35.7. The Employer or his authorized representative shall have the right to carry out inward inspection of the items on delivery at Site and if the items have been found to be not in line with the approved specifications, shall have the liberty to reject the same.

3.35.8. The Contractor has to provide the necessary testing reports to the Employer as and when required.

3.35.9. The Contractor shall submit 3 (three) copies of purchase order for materials purchased / to be purchased for use in the works, which will require inspection / testing by the Employer's representative at the places other than the Contractor's works before shipment. In such cases, all the above-mentioned clauses will apply. When the inspection/test has been satisfactorily completed, the Employer will issue a certificate to that effect.

3.35.10. Neither the waiver of inspection / testing nor acceptance after inspection and or testing by the Employer shall relieve the Contractor in way of the responsibility of supplying the plant/equipment/materials strictly in accordance with the specifications, drawings, etc. In any case, the Contractor shall remain fully responsible for satisfactory performance of the plant/equipment/materials.

3.36. THIRD PARTY INSPECTION AGENCY

3.36.1. A third-party inspection agency ("Third Party Inspectors" or "TPI") may be appointed by the Employer, at its sole discretion, to conduct any kind of inspection regarding procurement, fabrication, installation, hook-up and commissioning during the executionof the Project. The Contractor shall provide necessary access and coordination to conduct such inspections. The extent of third-party inspectors" involvement shall be finalized after mutual discussions between the Contractor and the Employer.

3.37. AUTHORIZED TEST CENTRES FOR TEST CERTIFICATES

3.37.1. The equipment, materials, cables, etc. for Power Evacuation and transmission system and civil materials shall have valid test certificates for their qualification as per above specified IEC / IS Standards by one of the NABL Accredited Test centers in India. In case of the equipment for which such Test facilities may not exist in India, test certificates from reputed ILAC Member body accredited Labs abroad (with proper proof of accreditation) will be acceptable.

3.38. COMMISSIONING

3.38.1. As soon as installation of the Facilities, in the opinion of the Contractor, has been completed as specified in the Technical Specifications, excluding minor items not materially affecting the operation or safety of the Facilities, the Contractor shall so notify the Engineer-in-Charge in writing to witness the pre-commissioning of the Facility.

3.38.2. After all the works in respect of Pre-commissioning are completed and in the opinion of the Contractor, the Facilities is ready for Commissioning, the Contractor shall so notify the Engineer-in-charge in writing. The commissioning and testing of the facilities shall be carried out in the presence of the Engineer-in-charge or his representative(s) in accordance with the procedure specified in Technical specification.

3.38.3. The period of O&M for Evacuation & Transmission System shall commence immediately after the COD of the Solar Plant.

3.39. OPERATIONAL ACCEPTANCE

3.39.1. Operational Acceptance shall occur in respect of the Facilities (or any part of the Facilities where the Contract provides for acceptance of the Facilities in parts) when the Performance Guarantee Test, as specified and in accordance with the procedure(s) specified in Section-IV: Technical Specifications, have been successfully completed.

3.39.2. At any time after successful completion of Guarantee Test(s) for Operational Acceptance, the Contractor shall give a notice of seven (07) days to the Employer requesting the issue of Operational Acceptance Certificate in respect of the Facilities or the part thereof specified in such notice. The Employer shall issue an Operational Acceptance Certificate upon the receipt of such notice provided Commissioning Certificate has been issued by the State Nodal Agency or Implementing Agency and COD of the entire plant or part thereof has been declared.

3.40. FINAL ACCEPTANCE AND WORK COMPLETION CERTIFICATE

3.40.1. Final acceptance shall occur when:

a) Contractor has completed the supply installation, testing & commissioning of allthe components of the Plant & Equipment along with its associated infrastructure & facilities in all respect, successfully completed all outstanding works and completion of all facilities in accordance with scope of works as specified in Technical Specifications as per satisfaction of Engineer-in-Charge and has submitted all technical documentation and acceptance of the same by Engineer-in-Charge.

b) The Employer/EIC has issued Operational Acceptance Certificate for the entire capacity of the project.

c) The Contractor has submitted the requisite Contract Performance Cum Security Guarantee (CPSG) as per Clause No. 3.48.

d) The Contractor has paid the Liquidated Damages as per the Clause No. 3.49 (if applicable)

3.40.2. Work Completion Certificate will be issued by Employer /EIC on occurrence of Final Acceptance.

3.41. REJECTION OF DEFECTIVE PLANT

3.41.1. If, during the progress of works, the Engineer-in-Charge shall decide and inform in writing to the Contractor that the Contractor has assembled any plant or part of the plant unsound or imperfect or has furnished any plant inferior to the quality specified, the Contractor, on receiving details of such defects or deficiencies shall, at his own expense, within 7 (Seven) days of receiving notice or otherwise, and for a period of time as may be decided by the Engineer-in-Charge for

making it good, proceed to alter, reconstruct or remove such work and furnish fresh equipment up to the standard of specifications. In case the Contractor fails to do so, the Engineer-in-charge may, on giving the Contractor minimum 7 (Seven) days' notice in writing of his intentions to do so, proceed to remove the portion of the work so complained of and at the risk and cost of the Contractor, perform all such work or furnish all such equipment, provided that nothing in this Clause shall be deemed to deprive the Employer of or affect any rights under the Contract which the Employer may otherwise have in respect of such defects and deficiencies.

3.41.2. In case of such replacement / rectification by the Employer, the Contractor shall be liable to pay to the Employer the extra cost, if any, for such replacement/by delivery and/or erected, as provided for in the original Contract, such extra cost being the ascertained difference between the price by the Employer under the provision above mentioned, for such replacement and the Contract price for the plant so replaced. If the Employer/EIC does not so replace the rejected plant, the Contractor shall be liable only to repay to the Employer/EIC all money paid by the Employer to him in respect of such plant.

3.41.3. In the event of such rejection, the Employer shall be entitled to the use of the plant in responsible and proper manner till a time reasonably sufficient to enable him to obtain other replacement plant.

3.42. GUARANTEE AND WARRANTY

3.42.1. The Contractor must ensure that the goods supplied under the contract are new, unused and of specified models and incorporate all recent improvements in design and materials unless provided otherwise in the contract. The warranty / guarantee period shall be as follows:

a) Transformers, associated switch gear and others: The Contractor shall furnish warranties / guarantees in respect of the items presented by the supplier/OEM.

3.42.2. Manufacture shall furnish in details their warranties / guarantees for these items. Transformers, CT, PT & switch gears, HT cables, System shall be warranted for minimum period of 5 Years.

3.42.3. Manufacturer's Warranty/Guarantee certificate shall be furnished by the contractor as per Clause No. 3.43.1.

3.42.4. Before finalizing the purchase order all warranty/guarantees agreements of equipment & material shall be approved from MAHAPREIT. During the period of Warranty / Guarantee the Contractor shall remain liable to replace any defective parts, that becomes defective in the plant, of his own manufacture or that of his sub-Contractors under the conditions provided for by the contract under and arising solely from faulty design, materials or workmanship, provided such defective parts are not repairable at site. After replacement, the defective parts shall be returned to the Contractors works at the expense of the Contractor unless otherwise arranged

3.42.5. In respect of goods not covered by the Sub Clause 3.43.1, the Employer shall be entitled to the benefit of such guarantee given to the Contractor by the original Contractor or manufacturer of such goods.

3.42.6. During the Operation & Maintenance and guarantee period, the Contractor shall be responsible for any defects in the work due to faulty workmanship or due to use of sub- standard materials in the work.

3.42.7. Any defects in the work during the guarantee period shall therefore, be rectified by the Contractor without any extra cost to the Employer within a reasonable time as may be considered from the date of defect notice failing which the Employer reserves the right to take up rectification work at the risk and cost of the Contractor.

3.42.8. In the event of emergency where, in the judgment of the Engineer-in-charge, delay would cause serious loss or damage, repairs, replacement, rectification, adjustment etc. may be done by the Engineer-in-charge or by any other Agency chosen by the Engineer-in-charge at the risk and cost of the Contractor. However, the Contractor shall assist the Employer/other Agency employed for necessary corrections. This shall not relieve the Contractor from any of his liability under the terms of the Contract. In case of defective parts which are not repairable at site but are essential for the commercial operation of the equipment, the Contractor and the Engineer-in-charge shall mutually agree to prepare rolling program for replacement or renewal, which will minimize interruption to the maximum extent, in the operation of the equipment.

3.42.9. In respect of goods supplied and or works done by the Contractor or goods supplied by the Sub-Contractor(s) to the Contractor where a longer guarantee is provided by such sub- Contractors, the Employer shall be entitled to the benefit of such longer guarantee period.

3.42.10. In case of defective parts which are not repairable at site but are essential for the operation of the equipment, the Contractor and the Engineer-in-charge shall mutually agree to an improvised arrangement to be made by the Contractor to ensure continued plant operation and to a Programme of replacement or renewal which will minimize interruption/dislocation to the maximum extent in the operation of the equipment. The cost of transportation, including all taxes & duties etc. as applicable, Insurance of defective parts from site and replacement will be borne by the Contractor.

3.42.11. It shall be expressly understood that all expenses in respect of replacement/repair during the warranty period or extended warranty period or as latent defects as noted above including, but not limited to, transportation cost, all taxes, duties and

levies as applicable, etc. till such spare parts are installed in the main equipment/ plant after necessary replacement/repair and the main equipment/ plant is put back into operation, shall entirely be to the Contractor's account.

3.43. DEFECT LIABILITY

3.43.1. The contractor shall warrant that the equipment will be new & in accordance with the contract documents, relevant standards and free from defects arising due to deficiencies in design & engineering and from defects in material and workmanship for a period of 12(twelve) calendar months from the date of Operational Acceptance of the power evacuation and transmission system. The Contractor shall be liable to replace/ upgrade with the specific consent of MAHAPREIT, any defective parts in the equipment supplied and erected by him under the contract arising solely from faulty design, materials and /or workmanship. All replaced defective parts shall be returned to the Contractor unless otherwise arranged by MAHAPREIT.

3.43.2. If it becomes necessary for the contractor to replace or renew any defective component/part of the plant, the provision of this clause shall apply to such component/part of the plant so replaced or renewed and the Defect Liability Period for such replaced or renewed component/part of the plant shall be extended for a period of 12 (twelve) calendar months from the date of such replacement/renewal or thirty- six (36) calendar months from the date of Operational Acceptance , whichever first occurs. The rectification / replacement / repairs shall be done at the shortest possible time to minimize the loss of the Employer and as mutually agreed to. If any defects are not remedied within a reasonable time, MAHAPREIT may proceed to do the work as per Clause No. 3.63, but without prejudice to any other rights, which MAHAPREIT may have against the contractor in respect of such defects.

3.43.3. The repaired or new parts will be furnished and erected free of cost by the Contractor. If any repair is carried out on contractor's behalf by MAHAPREIT at the site through some other Agency, the Contractor shall bear the cost of such repairs.

3.43.4. The cost of any special or general overhaul rendered necessary during the defect liability period due to defects in the plant or defective work carried out by the Contractor shall be borne by the Contractor.

3.43.5. The acceptance of the equipment by the MAHAPREIT shall in no way relieve the Contractor of his obligations under the Contract.

3.43.6. The Contractor shall be responsible for any loss or damage to the plant until the O&M contract is over.

3.44. MANUALS AND DESCRIPTIVE LITERATURE

3.44.1. The Contractor shall furnish 3 (Three) copies of Instruction Manuals at least 1 (One) month prior to commencement of Pre-Commissioning activities. The manuals shall contain full details such as drawings of all the equipment furnished, storage procedures and operation and maintenance procedures of the equipment. Descriptive literature and data on various equipment shall also be furnished along with these manuals.

3.45. SPARES

3.45.1. The Contractor shall supply and maintain adequate inventory of all the spares required for safe, reliable and trouble-free operation & maintenance of the complete Power Evacuation & Transmission System during the period of contract. The price of these spares shall be deemed to be included in the contract price.

3.45.2. All spares for the equipment under the Contract will strictly conform to the specification and will be identical to the corresponding main equipment /components supplied under the Contract and shall be interchangeable.

3.45.3. Without any extra cost, the Contractor shall provide the Employer with the catalogues, drawings, part numbers and any other information/documents required by the Employer in the form of manual(s) so as to enable the Employer to identify the spares required during the whole life of all the equipment to be supplied.

3.45.4. The Contractor shall ensure the long-term availability of spares for the equipment covered under the Contract. In case, any spare becomes obsolete, the Contractor will ensure adequate inventory of other equivalent make of such obsolete spare and shall also provide to the Employer, detailed information (catalogues, make, part number, drawings etc.,) of the same.

3.45.5. Further in case of discontinuance of supply of spares by the Contractor or his Sub- Contractors, the Contractor will provide the Employer with full information for replacement of such spares with other equivalent make.

3.45.6. The Contractor shall provide a list of all the spares required to maintain the facility for two **(02)** years. The Contractor agrees to supply such spare parts, as recommended or otherwise required for efficient operation and maintenance of the Facilities.

3.46. CONTRACT PERFORMANCE BANK GUARANTEE (PBG)

3.46.1. Within twenty-eight (28) days from the date of issue of Letter of Award by the Employer, the Successful Bidder shall furnish to the Employer, an unconditional/irrevocable Contract Performance cum Security Guarantee (CPSG) for an amount

equivalent to 5 % of total value of EPC Contract Price with a validity up to sixty (60) days beyond the expiry of Defect Liability Period as per Clause No 3.43 of this Bid Document.

3.46.2. The Contractor shall submit a CPSG for an amount equivalent to 5 % of Contract Price, whichever is higher, with initial validity up to next 02(Two) year, 30 days prior to expiry of earlier CPSG submitted by the contractor as per Clause No 3.46.1.

3.46.3. Every year a fresh bank guarantee shall be submitted by the Bidder, having validity for the subsequent year, one month prior to expiry of existing Bank Guarantee or the existing bank guarantee can be amended suitably for specified amount every year till 60 days beyond the O&M contract Period.

3.46.4. The Bank Guarantee against CPBG submitted by the contractor as per Clause No 3.46.1 shall be discharged by the Employer and returned to the Contractor without any interest, not later than sixty (60) days after issuance of Defect Liability Certificate of the equipment under the contract and acceptance thereof by the Employer; provided, however, that if the Defects Liability Period has been extended on any part of the Facilities pursuant to Clause No 3.44.2 hereof, the Contractor shall issue an additional security in an amount proportionate to the Contract Price of that part. This security shall be returned to the Contractor immediately after 60 days beyond the Defects Liability period of such equipment(s).

The Bank Guarantee against CPSG submitted by the contractor as per Clause No 3.46.2 shall be discharged by the Employer and returned to the Contractor without any interest, not later than sixty (60) day after the completion of O&M contract period provided however that the entire plant is handed over by the contractor to the Employer as per provisions of the contract and acceptance by the Employer.

3.46.5. The above performance Bank Guarantees shall be issued by any Scheduled Bank / Nationalized Bank and denominated in the currency of the contract and shall be in the form of irrevocable Bank Guarantee in the format attached at Annexure-2 & Annexure- 3 of this Bid Documents.

3.46.6. Bidders are advised to ensure by providing that the message is sent by their bankers and the bidders must submit the reference details along with the bid.

3.46.7. The proceeds of the Bank Guarantee against CPSG shall be payable to the Employer as compensation for any loss resulting from the Contractor's failure to complete its obligations under the contract.

3.46.8. In case of any shortfall at any stage on account of recovery of any dues from the CPSG, Contractor shall make-up the recovered amount by furnishing a separate CPSG for such amount.

3.46.9. In the event of failure of the Contractor to extend the CPSG for the required period, the Employer reserves the right to invoke the CPSG in favor of Employer on the date of its expiry.

3.46.10. The interest @ 15.5 % per annum shall be charged on delay period for breach in timely submission of PBG without prejudice to right of MAHAPREIT to other remedies available.

3.47. LIQUIDATED DAMAGES(LD) FOR EPC CONTRACT

3.47.1. Time is the essence of the Contract. Except otherwise specifically provided in the contract, if the performance of the Contract is delayed beyond the time schedule as specified in the Contract due to reasons attributable to the Contractor, the Employer shall, without prejudice to its other remedies under the contract, retain/recover the following damages:

3.47.2. **Liquidated Damages due to delay in achieving commissioning and testing of Power Evacuation & Transmission System:**

In case of failure to achieve the milestone for commissioning & Testing of Power Evacuation & Transmission System and other civil works as per the stipulated time period, the Contractor shall pay to the employer as Liquidated Damages and not as penalty, in the following manner:

a) Delay Commissioning and testing : - Liquidated Damages shall be payable at the rate of **0.05%** of the total contract price along with applicable GST per week delay.

3.47.3. The total amount of liquidated damages for delay under the Clause No- 3.49.3 (a) above will be subject to a maximum of five percent (5%) of the total Contract Price along with applicable GST.

3.48. TERMS AND PROCEDURES OF PAYMENT

3.48.1. **General**

a) The Employer shall pay to the Contractor after signing the Contract Agreement, in the following manner and at the following terms, on the basis of the Price Break-up given in the Letter of Award subject to any deduction which the

Employer may be authorized to make under this contract and/or to any additions or deductions provided for in this contract.

b) The Contractor's request(s) for payment shall be made to the Engineer-In-Charge in writing, upon fulfillment of required obligations stipulated in the contract.

c) The contractor shall submit the Invoice in triplicate showing description, quantity, Unit rate and total amount with all supporting documents as per terms of the contract. After due verification, the Employer shall process the verified Bill for release of payment. In case contractor fails to submit the Invoice with all the required documents, the Employer reserves the right to hold the payment against such bills.

d) Payments shall be made by the Employer within thirty (30) days after submission of an invoice along with all supporting documents as per terms of contract by the Contractor.

e) The contractor shall ensure to make timely payments to its sub-contractor(s)/sub- vendor(s) engaged in the execution of project to ensure timely completion of works. However, in case of delayed payment/non-payment by the contractor to its approved sub-contractor(s)/sub-vendor(s), the Employer reserves the right to make direct payment to such sub-contractor(s)/sub-vendor(s) as per the terms of payment on the request of Contractor or on the request of approved sub-contractor(s)/sub-vendor(s) or otherwise, in the interest of completion of project.

3.48.2. **Invoice Details for Taxes and duties**

Except as otherwise specifically provided in the contract, the Employer shall pay to the Contractor GST & Cess thereon, applicable if any, on submission of GST Invoice containing mainly the following contents.

i. Name, Address & Contact Detail of the Service Provider/contractor.
ii. GSTIN of the Service Provider/Contractor.
iii. PAN of the Service Provider/Contractor.
iv. GSTIN of the Employer/Owner
v. HSN/SAC of the respective item(s)

3.48.3. **E- Payment**

MAHAPREIT shall make all the payments in respect of Contractor through e-payment system. Contractor shall open its account with banks having Core Banking Facility (CBS Branch) and fill in Electronic Fund Transfer (EFT) Form (to be submitted at signing of Contract Agreement) and return to Employer duly signed and stamped by its bankers. In case Contractor fails to provide requisite information as sought, it may result in delay in payment for which MAHAPREIT will not be responsible. Any directions, instructions or orders issued by the Government of India from time to time regarding any or all matters arising or pertaining to the Import License shall be binding on the Contractor.

3.48.4. **Terms of Payment**

The payment of Contract Value excluding O&M cost for the Bidder shall be made as per following:

i. **50% (Fifty Percent)** of the Contract value on receipt of complete materials at site which includes materials and equipment for 33 KV Power evacuation Substation at Solar Project , materials for Transmission Lines, etc & materials/equipment required at Sub station end as well as completion of complete installation and erection works on production of the following and certification by the MSEDCL .: -
   a) Application of payment along with three (3) copies of GST Invoice.
   b) Physical Verification & discrepancy report by MAHAPREIT for the equipment/material received and stored at site. Payment shall be released after making adjustment of discrepancies only.
ii. **20 % (Twenty percent)** of the Contract value shall be paid after completion of all the civil works like land development, security cabin and roads etc upon certification by the MSEDCL.
iii. **20 % (Twenty percent)** of the Contract value shall be paid after commission and testing of the Evacuation & Transmission System on final acceptance and issue of Work Completion Certificate by the EIC.
iv. **10% (Ten percent)** Payment towards services of O&M cost shall be paid to the Bidder on pro-rata basis at the end of each financial year after acceptance of quality standard approved by MAHAPREIT subject to adjustment of any penalty or liquidated damages liable to be adjusted from the Bidder.

3.48.5. The Bidder shall note that the Terms of Payment as per Clause 3.50.4 as above is based on the identified project for which the NTP has been issued by MAHAPREIT.

3.48.6. Delayed Payment

Omissions on the part of the EIC to pay the amount due upon measurement or otherwise shall neither vitiate nor make the contract void. Further, no claim for interest or damages will be entertained or payable by the Employer upon any Bank Guarantee or payments in arrears or retention of amount due to non- fulfilment of obligation on the part of the contractor

any balance amount (to be paid if any) which may become due on final settlement/re- conciliation of the account at the time of closure of the contract or Amount withheld by the Employer owing to any dispute or difference between the parties.

The Contractor shall be entitled to this payment without formal notice or certification, and without prejudice to any other right or remedy.

3.48.7. **Final Bill**

The final bill relating to the EPC Contract shall be prepared only when the equipment has been installed and tested for Final acceptance under Clause No 3.41 and it will include adjustment of all claims against the Contractor by the Engineer-in-Charge. The amount equivalent to losses or damages for which Contractor fails to settle claim with the insurer before completion of entire work would also be recovered from any amount due to contractor.

3.49. CONTRACT PRICE AND PRICE ADJUSTMENT

The bidder shall give prices of EPC contract and O&M contract for 05 years as prescribed under Bid Response Sheet I to IV except otherwise specifically mentioned in the bid document, the prices shall remain FIRM during the entire period of Contract.

3.50. TAXES AND DUTIES

a) Except as otherwise specifically provided in the contract, the Contractor shall bear and pay all taxes, duties, cess, levies and charges assessed on the Contractor, by all municipal, state or central government authorities.

b) The contractor shall furnish proof of GST registration with GSTN Portal in the State in which the Project is being executed, covering the services under this contract. Registration should also bear endorsement for the premises from where the billing shall be done by the contractor on MAHAPREIT for this project/ work.

c) Contractor shall submit to MAHAPREIT the GST compliant tax invoice/debit note/revised tax invoice on the basis of which MAHAPREIT may claim the input tax credit in its return.

d) Tax invoice/debit Note/revised tax invoice shall contain all such particulars as prescribed in GST law.

e) TDS under GST as applicable shall be deducted at prevailing rates from the running bills.

f) The Contractor shall be responsible for the issuance of e-way bill and other compliances relating to e-way bill as per GST law. The existing provisions regarding road permit will continue till such time if applicable.

3.51. STATUTORY VARIATIONS

3.51.1. If, after the date seven (7) days prior to deadline for date of bid submission, in the country where the Site is located, any taxes, duties & levies (GST), law, regulation, ordinance, order or by- law having the force of law is enacted, promulgated, abrogated or changed (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 items in respect of direct transactions between the Employer and the Contractor and Bought out items (to be dispatched directly from the sub-vendor's works to Employer's site). This adjustment shall not be applicable on procurement of raw materials, intermediary components etc. by the Contractor.

3.51.2. The above adjustment however shall be restricted to schedule date of dispatch or actual whichever is less.

3.51.3. In the event of any change in the current status of the project after the date of submission of Price Bid and which results in reduction to the Price Bid through addition/ extension of any available benefit, drawback or concession directly resulting in reduction of liability of taxes (other than personnel taxes), the Contractor shall pass on such benefits to MAHAPREIT to the extent which is directly attributable to such change in status.

3.52. NEW TAXES/LEVIES

a) In case Government imposes any new levy / tax, after the date seven (7) days prior to deadline for date of bid submission, during the tenure of the contract, MAHAPREIT shall reimburse the same at actual on submission of documentary proof of payment subject to the satisfaction of MAHAPREIT that such new levy / tax is applicable to this contract.

b) Unless otherwise stipulated in Clause No. 3.53, any liability occurs due to, increase in the rate of GST or it is found that the actual rate of GST on any item is higher than the quoted rate, the same shall be borne by the contractor or recovered from any payment/amount due to the contractor if it is already paid/submitted or to be paid/submitted by MAHAPREIT to the statutory body/concerned authority.

c) As regards the Indian Income Tax, Surcharge on Income Tax and any other Corporate Tax the Employer shall not bear any tax liability whatsoever. The Contractor shall be liable and responsible for payment of such tax, if attracted under the provisions of the law existing or subsequent and Employer will make tax deductions at source (TDS) as applicable.

3.53. DEDUCTION FROM CONTRACT PRICE

3.53.1. All costs, claims, damages or expenses which the Employer may have paid for which the Contractor is liable under the Contract, shall have to be refunded by the Contractor within 21 (Twenty-One) days of receipt of the bills. If the bills are not paid within the said period, this may be deducted by the Engineer-in-charge from the Performance Guarantee or from any money due or which will become due to the Contractor under this Contract.

3.53.2. The Employer shall be entitled to recover all dues in terms of the Contract including, but not limited to, Liquidated Damages for delay etc. by way of deductions from the payments due to the Contractor or that may become due to the Contractor in future or from any securities/guarantees under the Contract and/or otherwise.

3.53.3. In case of any dispute, the sum of money so obtained under this clause by the Employer will be kept withheld or retained as such by the Employer till all the claims arising out of the Contract is either mutually settled or determined by the Arbitrator, or by the competent Court, as the case may be, and that the Contractor shall have no claim for interest or damages whatsoever on this account, subject to compliance of the Govt. of India Guidelines.

3.54. INSURANCE

3.54.1. **Insurance for EPC Contract**

The Contractor shall at its expense take out and maintain in effect, or cause to be taken out and maintained in effect during the performance of the Contract, the insurances set forth below in the sums and with the deductibles and other conditions specified below. The identity of the insurers and the form of the policies shall be subject to the approval of the Employer, who should not unreasonably withhold such approval.

I. Cargo/Marine All Risk Insurance: Covering loss or damage occurring, while in transit from the Contractor's or Subcontractor's works or stores until arrival at the site including unloading, to the Plant and Equipment (including spare parts thereof) and to the Contractor's Equipment.
This policy shall cover 'ALL RISKS' under and /or on deck as per Institute Cargo Clause 'A'.

II. Erection All Risks Insurance
Covering any physical loss or damage to the equipment during handling,transportation, storage, erection of the Facilities at the Site, occurring prior to completion of the Facilities, with extended maintenance coverage for the Contractor's liability in respect of any loss or damage occurring during the Defects Liability Period while the Contractor is on the Site for the purpose of performing itsobligations during the Defect Liability Period.

III. Third Party Insurance
Before receipt of equipment at site but without limiting his obligations and responsibilities under this clause hereof, the Contractor shall insure against his liability for any equipment, material, property (including the Employer's property and any parts of the facilities that have been accepted by the Employer),or physicaldamage covering bodily injury or death suffered by third parties (including the Employer's personnel) by or arising out of the execution of the contract or in the carrying out of contract.

IV. Workmen's Compensation Insurance
The contractor shall protect himself against all claims applicable under the Workmen's Compensation Act, 1923. This policy shall also cover the contractor against claims for injury, disability, disease or death of his or his sub-contractor's employees, which for any reason are not covered under the Workmen's Compensation Act, 1923. The liabilities under Workmen's Compensation Insurance shall be as per statutory provisions.
Employer shall not be liable for or in respect of any damage or compensation payable in law in respect or in consequence of any accident or injury to any workman or other person in the employment of the contractor(s) or any sub- contractor(s), save and except an accident or injury resulting from any act or default of the Employer.

Note:

i. The Employer shall be named as co-insured under all insurance policies taken out by the Contractor pursuant to GCC Clause 3.5 except for Third Party Liability, Workman's Compensation. Payment shall be released to the Contractor by the Insurance Company after receipt of NOC from the Employer. The appropriate Clause shall be incorporated in the Insurance Policy taken by Contractor to ensure this requirement.

ii. In case the Contractor has taken/takes blanket insurance policy for "Erection All Risk policy" during storage and erection, such policy shall also be acceptable to Employer provided that; the name of the Employer and the Project is endorsed in the said policies.

iii. The Contractor shall provide the Engineer-in-Charge with copies of all insurance policies and documents taken out by him in pursuance of the contract. Any amendment (s) of Insurance Policies, if required, shall be informed to the Contractor by Engineer-in-In charge. The Insurance Policies shall be amended by the Contractor within 15 days of the receipt of such request. In case, Contractor fails to submit amended Insurance Policy than no future/progressive payment shall be released.

iv. The Contractor shall ensure that, where applicable, its Sub- contractor(s) shall take out and maintain in effect

adequate insurance policies for their personnel and vehicles and for work executed by them under the Contract, unless such Subcontractors are covered by the policies taken out by the Contractor.

v. *It shall be the responsibility of the contractor to extend the period of insurance policy (ies) if required to comply with the provisions of contract. The Engineer-in-Charge shall inform the Contractor in writing at least thirty (30) days in advance from the date of expiry for the extension of the Insurance Policy. If the Contractor fails to extend the said policy within 15 days of notice period, MAHAPREIT reserves the right to extend the said policy and the cost of the premium paid towards extension of said policy shall be recovered/deducted from the amount payable/due to the Contractor.*

vi. *The Contractor shall be responsible for preferring of all claims and make good the damages or loss by way of repairs and / or replacement of the work, damaged or lost. The Transfer of Title shall not in any way relieve the Contractor of the above responsibility during the period of contract. The Employer shall give to the Contractor all such reasonable assistance with respect to insurance claims in which the Employer's interest is involved, the Contractor shall not give any release or make any compromise with the insurer without the prior written consent of the Employer.*

vii. *Notwithstanding the insurance requirements mentioned above, it would be the Contractor's responsibility to take adequate insurance cover as may be pertinent to protect his interest and interest of the Employer. If at any point of time during execution of the Contract, the insurance policies are found to be inadequate, the Contractor shall take fresh insurance policies meeting aforesaid requirements.*

viii. *In case of any loss or damage or pilferage or theft or fire accident or combination of the said incidents etc. under the coverage of insurance, the Contractor shall make good the damages or loss by way of repairs and/or replacement of plant and equipment damaged or lost and lodge the claim as per rules of insurance. Any FIR required to be lodged to local Police Station shall be the responsibility of the Contractor. Notwithstanding the extent of insurances cover and the amount of claim available from the underwriter, the contractor shall be liable to make good the full replacement/rectification of all the equipment/materials and to ensure their availability as per project requirement without additional financial liability to the Employer.*

ix. *All cost on account of insurance liabilities covered under the contract will be to the Contractor's account and will be included in contract price.*

x. *The Contractor shall arrange insurance with Indian Insurance Companies.*

3.54.2. **Insurance for O&M contract**

Insurance during Operational Acceptance and O&M Period

The Contractor shall at its expense take out and maintain in effect the insurances set forth belowduring Operational Acceptance and O&M Period. The insurances provided shall be seamless with the insurance provided during the construction period by the bidder with no gap between thetwo:

I. Fire & Allied Peril insurance

Insurance policy for Fire and allied perils must include clauses such as earthquake, flood,storms, cyclone, tempest, hurricane, inundation, typhoon, theft & burglary and Public Liability Insurance (Third Party), burglary, reinstatement/replacement value clause, earthquake cover, and RSMTD cover.

II. Workmen's Compensation Insurance

This insurance shall protect the Contractor against all claims applicable under the

- Workmen's Compensation Act, 1948
- Workmen's Compensation Provisions.
- As per StatutoryEmployee's Liability Provisions.

***III*. Comprehensive General Liability Insurance:**

The insurance shall protect the Contractor against all claims arising from injuries, disabilities, disease or death of members of public or damage to property of others, due to any act or omission on the part of the Contractor, his agents, his employees, his representatives and Sub Contractors or from riots, strikes and civil commotion.

Note: The contractor is obliged to take all the O&M Insurances mentioned above for theproject immediately after the commissioning of the Evacuation & Transmission System.

3.55. DELAYS BY EMPLOYER OR ITS AUTHORIZED REPRESENTATIVE(S)

3.55.1. In case the Contractor's performance is delayed due to any act of omission on the part of the Employer, then the Contractor shall be given due extension of time for completion of the work, to the extent such omission on the part of the Employer has caused delay in the Contractor's performance of the contract. Regarding reasonableness or otherwise of the extension of time, the decision of the Engineer -in Charge shall be final.

3.55.2. In addition, the Contractor shall be entitled to claim demonstrable and reasonable compensation if such delays have resulted in any increase in cost. The Employer shall examine the justification for such a request for claim and if satisfied,

the extent of compensation shall be mutually agreed depending upon the circumstances at the time of such an occurrence.

3.56. DELAYS IN THE CONTRACTOR'S PERFORMANCE

3.56.1. Delivery of the Goods and performance of Services shall be made by the Contractor in accordance with the time schedule prescribed by the Employer in Bid Document.

3.56.2. Except as provided under Conditions of Contract Clause No 3.59, a delay by the Contractor in the performance of its obligations shall render the Contractor liable to the imposition of liquidated damages pursuant to Conditions of Contract Clause 3.49 unless an extension of time is agreed upon pursuant to Conditions of Contract Clause 3.61 without the application of liquidated damages.

3.57. FORCE MAJEURE

3.57.1. Notwithstanding the provisions of Condition of Contract Clause No. 3.49, 3.64 and 3.58, the Contractor shall not be liable for forfeiture of its Contract Performance Guarantee, liquidated damages or termination for default if and to the extent that the delay in performance or other failure to perform its obligations under the contract is the result of an event of Force Majeure.

3.57.2. "Force Majeure "shall mean any event beyond the reasonable control of the Employer or of the Contractor, as the case may be, and which is unavoidable notwithstanding the reasonable care of the party affected, and shall include, without limitation, the following:

i. war, hostilities or war like operations (whether as state of war be declared or not), invasion, act of foreign enemy and civil war,

ii. rebellion, revolution, insurrection, mutiny, usurpation of civil or military government, conspiracy, riot, civil commotion and terrorist acts,

iii. confiscation, nationalization, mobilization, commandeering or requisition by or under the order the order of any government or de jure or de facto authority or ruler or any other act or failure to act of any local state or national government authority,

iv. sabotage, embargo, import restriction, port congestion, lack of usual means of public transportation and communication, shipwreck, shortage or restriction of power supply, epidemics, quarantine and plague; but does not include any strike/ lockout and any type of agitation/gherao/dharna by local communities causing restriction/blockade to the 'right of way' to the site or causing hindrance to the working of the Project,

v. earthquake, landslide, volcanic activity, fire, flood/ flash flood or inundation, tidal wave, typhoon or cyclone, hurricane, storm, lightning, or other inclement weather condition, nuclear and pressure waves or other natural or physical disaster; but does not include incessant rain,

vi. Shortage of labour, materials or utilities were caused by circumstances that are themselves Force Majeure

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

3.57.4. The Contractor or MAHAPREIT shall not be liable for delays in performing their respective obligations resulting from and to the extent applicable and necessitating rescheduling, if any, of the balance critical activities to any Force Majeure causes as referred to and/or defined above. The date of completion will, be extended by a reasonable and justifiable time.

3.57.5. The delay in fulfilment by the Parties of their obligations under this Contract shall not exceed the duration of Force-Majeure circumstances and also their consequences.

3.57.6. If the performance of the contract is delayed for more than six (6) months for one of the reasons mentioned above, the performance of contract shall be continued on mutual terms & conditions.

3.57.7. Force majeure shall not apply to MAHAPREIT's obligations to make payment for the work done under the contract.

3.57.8. The contractor shall not claim any compensation for force majeure conditions and shall take appropriate steps to ensure man & material utilized by it under the contract well in advance.

3.58. SUSPENSION OF WORK

3.58.1. The Employer reserves the right to suspend and reinstate execution of the whole or any part of the work. Order for suspension or reinstatement of the works will be issued by the Engineer-in- charge to the Contractor in writing. The Time for Completion of the works will be extended for a period equal to the duration of the suspension.

3.58.2. Any necessary and demonstrable costs incurred by the Contractor, as a result of such suspension of the works, will be paid by the Employer, provided that such costs are substantiated to the satisfaction of the Employer. The Employer shall not be responsible for any liabilities if suspension or delay is due to some default on the part of the Contractor or his Sub-Contractor

3.59. EXTENSION OF TIME FOR COMPLETION

3.59.1. Except where otherwise specifically provided in the Contract, if at any time during performance of the contract, the Contractor should encounter conditions impeding timely delivery of the Goods/execution of the contracts, the Contractor shall promptly notify the Employer in writing of the fact of the delay, its likely duration and its cause(s) together with particulars of the event or circumstance and supporting documents/data/records, hindrance register, evidence(s) justifying such extension as soon as reasonably practicable after the commencement of such event or circumstance. Following documents shall become principal basis for consideration of time extension:

i. Records maintained in the Hindrance Register
ii. Minutes of Weekly Project Review Meeting
iii. Minutes of Monthly Project Review Meeting
iv. Written notices issued by EIC or his authorized representative to contractor in relevant period

As soon as practicable after receipt of the Contractor's notice, the Employer shall evaluate the situation and may at its discretion extend the Contractor's time for performance, with or without levy of Liquidated Damages, in which case the extension shall be ratified by the parties by amendment of the contract.

3.59.2. The Contractor shall at all times use its reasonable efforts to minimize any delay in the performance of its obligations under the Contract.

3.60. BANKRUPTCY

3.60.1. If the Contractor shall become bankrupt or have a receiving order made against him or compound with his creditors, or being a Corporation commence to be wound up, not being a voluntary winding up for the purpose only of amalgamation reconstruction, or carry on its business under a receiver for the benefit of its creditors or any of them, the Employer will be at liberty.

a) To terminate the contract forthwith by notice in writing to the liquidator or receiver or to any person in whom the contract may become vested and to act in the manner entitled `Contractor's Default', as though the last-mentioned notice has been the notice referred to in such clause and the equipment and materials have been taken out of the Contractor's hands

b) To give such liquidator, receiver, or other person the option of carrying out the contract subject to his providing a guarantee, for the due and faithful performance of the contract, up to an amount to be determined by the Employer.

3.61. CONTRACTOR'S DEFAULT

3.61.1. If the Contractor shall neglect to execute the works with due diligence and expedition or shall refuse or neglect to comply with any reasonable orders given to him in writing by the Engineer- in-charge in connection with the works, or shall contravene the provisions of the Contract, the Employer may give notice of default, in writing to the Contractor to make good the failure, neglect or contravention complained of. Should the Contractor fail to comply with the notice within thirty (30) days or otherwise, for a period of time as may be decided by the Engineer-in-charge from the date of service thereof, then and in such a case, the Employer shall be at liberty to employ other workmen and forthwith execute such part of the works as the Contractor may have neglected to do or, if the Employer shall think fit, without prejudice to any other right he may have under the Contract, to take the works wholly or in part out of the Contractor's hand and enter into a separate Contract with any other person or persons to complete the works or any part thereof. In such event, the Employer shall have free use of all the Contractor's equipment that may have been at that time at the site in connection with the works, without being responsible to the Contractor for wear and tear thereof and to the exclusion of any right of the Contractor over the same, and the Employer shall be entitled to retain and apply any balance which may otherwise be due under the Contract by him to the Contractor ,or such part thereof as may be necessary, to the payment of cost of executing the said part of the works or of completing the works, as the case may be. If the cost of completing the works or executing a part thereof as aforesaid shall exceed the balance due to the Contractor, the Contractor shall pay such excess amount. Such payment of excess amount shall be independent of the Liquidated Damages for delay that the Contractor shall have to pay if the completion of works is delayed.

3.61.2. In addition, such action by the Employer as aforesaid shall not relieve the Contractor of his liability to pay Liquidated Damages for delay in completion of works as defined in the Contract.

3.61.3. The termination of the Contract under this Clause shall not entitle the Contractor to reduce the value of the Contract Performance Guarantee nor the time thereof. The Performance Guarantee shall be valid for the full value and for the full period as originally stipulated in the Contract, including Guarantee Period.

3.62. TERMINATION OF CONTRACT ON CONTRACTOR'S DEFAULT

3.62.1. MAHAPREIT, without prejudice to any other remedy for breach of contract, by written notice of default sent to the Contractor, by registered A/D may terminate this contract in whole or in part in any of the following cases:

(a) If the Contractor fails to perform any obligation(s) under the contract or

(b) If the Contractor, in the judgment of MAHAPREIT has engaged in corrupt or fraudulent practices in competing for

or in executing the contract.

3.62.2. In the event MAHAPREIT terminates the contract in whole or in part, pursuant to Condition of Contract Clause 3.64.1, MAHAPREIT may procure, upon such terms and in such manner as it deems appropriate, Goods or Services similar to those undelivered at the risk and cost of the Contractor and without any prejudice to any right of the Employer provided in the Contract. The Contractor shall be liable to MAHAPREIT for any excess costs for such similar Goods or Services. However, the Contractor shall continue performance of the contract to the extent not terminated. The Contractor, however, shall under no circumstances, be entitled to any gain on account of such action by the Employer

3.62.3. In case of termination of the contract due to contractor's default, the contractor may be debarred from participation in future tenders by the employer, through a communication in writing for a period to be specified therein.

3.63. TERMINATION OF THE CONTRACT ON THE EMPLOYER'S INITIATIVE

3.63.1. The Employer reserves the right to terminate the Contract either in part or in full due to reasons other than those mentioned under the Clause No 3.62 & 3.64 of this Bid Document. The Employer, shall, in such an event, give 30 (Thirty) days' notice in writing to the Contractor of his decision to do so.

3.63.2. The Contractor, upon receipt of such notice, shall discontinue the work on the date and, to the extent specified in the notice, make all reasonable efforts to obtain cancellation of all orders and Contracts to the extent they are related to the work terminated and upon terms favourable to the Employer, stop all further sub-Contracting or purchasing activity related to the work terminated, and assist the Employer in maintenance, protection and disposition of the works acquired under the Contract by the Employer.

3.63.3. In the event of such termination, the Contractor shall be paid compensation, equitable and reasonable dictated by the circumstances prevalent at the time of termination, as decided by the Employer.

3.64. TERMINATION DUE TO INSOLVENCY

3.64.1. The Employer may at any time terminate the contract by giving written notice to the Contractor if the Contractor becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the Contractor, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the Employer.

3.65. FORECLOSURE OF CONTRACT IN FULL OR PART DUE TO ABANDON OR REDUCTION IN SCOPE OF WORK

3.65.1. If at any time after acceptance of the Bid the Employer decides to abandon or reduce the scope of the works for reason whatsoever and hence does not require the whole or any part of the work to be carried out, the Engineer-In-Charge shall give notice in writing to that effect to the Contractor and the Contractor shall have no claim to any Payment of compensation or otherwise whatsoever, on account of any profit or advantage which he might have derived from the execution of the works in full but which he could not derive in consequence of the foreclosure of the whole or part of the works. The Contractor shall be paid at Contract rates for actual amount of the works executed at site

3.66. SETTLEMENT OF DISPUTES

3.66.1. **ADJUDICATOR**

i. If any dispute of any kind whatsoever shall arise between the Employer and the Contractor in connection with or arising out of the Contract, including without prejudice to the generality of the foregoing, any question regarding its existence, validity or termination, or the execution of the facilities-whether during the progress of the facilities or after their completion and whether before or after the termination, abandonment or breach of the contract-parties shall seek to resolve such a dispute or difference by mutual consultation. If the parties fail to resolve such a dispute or difference by mutual consultation, then the dispute shall be referred in writing by either party to the Adjudicator, with a copy to the other party.

ii. The dispute adjudication board (DAB) shall consist of either one or three suitably qualified persons ("the Members").

iii. If the DAB consists of three members, each party shall nominate one member for the approval of the other party. The parties shall consult both the members and shall agree upon third member, who shall be appointed as Chairman of DAB.

iv. The Adjudicator shall give its decision in writing to both parties within twenty-eight (28) days of a dispute being referred to it. If the Adjudicator has done so, and no notice of intention to commence arbitration has been given by either the Employer or the Contractor within one hundred eighty (180) days of such reference, the decision shall become final and binding upon the Employer and the Contractor. Any decision that has become final and binding shall be implemented by the parties forthwith.

v. Should the Adjudicator resign or die, or should the Employer and the Contractor agree that the Adjudicator is not fulfilling its functions in accordance with the provisions of the Approvals Failing agreement between the two within twenty-eight (28) days, the new Adjudicator shall be appointed at the request of either party or by the Appointing Authority (the CMD, MAHAPREIT Ltd). The adjudicator shall be paid fee plus reasonable expenditures incurred in the execution of its duties as adjudicator under the contract. This cost shall be divided equally between the Employer and the Contractor.

3.66.2. **ARBITRATION**

a) If either the Employer or the Contractor is dissatisfied with the Adjudicator's decision, or if the Adjudicator fails to give a decision within twenty-eight (28) days of a dispute being referred to it, then either the Employer or the Contractor may, within one hundred eighty (180) days of such reference, give notice to the other party, of its intention to commence arbitration, as hereinafter provided, as to the matter in dispute, and no arbitration in respect of this matter may be commenced unless such notice is given.

b) Any dispute in respect of which a notice of intention to commence arbitration has been given, in accordance with the above clause, shall be finally settled by arbitration. Arbitration may be commenced prior to or after completion of the Facilities.

c) In case the Contractor is a Public Sector Enterprise or a Government Organization/Department:

In the event of any dispute or difference relating to the interpretation and applications of the provisions of commercial contract(s) between Central Public Sector Enterprises (CPSEs)/ Port Trusts inter se and also between CPSEs and Government Departments/Organizations(excluding disputes concerning Railways, Income Tax, Customs & Excise Department) such dispute or difference shall be taken up by either party for resolution through AMRCD (Administrative mechanism for resolution of CPSEs Disputes) as mentioned in DPE OM No. 4(1)/2013-DPE (GM)/FTS-1835 dated 22-05- 2018 and any subsequent amendment(s) issued from time to time.

d) In case the contractor is not a Public Sector Enterprise or a Government Department/Organization:

Any dispute submitted by a party to arbitration shall be heard by an arbitration panel composed of three arbitrators, in accordance with the provisions set forth below:

a) The Employer and the Contractor shall each appoint one arbitrator, and these two arbitrators shall jointly appoint a third arbitrator, who shall chair the arbitration panel. If the two arbitrators do not succeed in appointing a third arbitrator within twenty-eight (28) days after the latter of the two arbitrators has been appointed, the third arbitrator shall, at the request of either party, be appointed by the Appointing Authority for arbitrator (the CMD, MAHAPREIT Limited).

b) If one party fails to appoint its arbitrator within forty-two (42) days after the other party has named its arbitrator, the party which has named an arbitrator may request the Appointing Authority to appoint the second arbitrator.

c) If for any reason an arbitrator is unable to perform its function, the mandate of the Arbitrator shall terminate in accordance with the provisions of applicable laws and a substitute shall be appointed in the same manner as the original arbitrator.

d) Arbitration proceedings shall be conducted in accordance with the Arbitration and Conciliation Act, 1996 and any amendment(s) thereto as issued by the Govt of India from time to time. The venue of arbitration shall be at Mumbai / Delhi/ the place where the Solar Power Project is located.

e) The decision of a majority of the arbitrators (or of the third arbitrator chairing the arbitration, if there is no such majority) shall be final and binding and shall be enforceable in any court of competent jurisdiction as decree of the court. The parties thereby waive any objections to or claims of immunity from such enforcement.

f) The arbitrator(s) shall give reasoned award.

g) Notwithstanding any reference to the arbitration herein, the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree.

3.67. GOVERNING LANGUAGE

3.67.1. The bid prepared by bidder and all correspondence/ drawing/ documents relating to the bid between bidder and MAHAPREIT shall be written in English language only. In case the literature is furnished in another language, same may be accompanied by English translation duly authenticated by the authorized translator. The English version shall govern in case of any variation.

3.68. APPLICABLE LAW/ JURISDICTION

3.68.1. The Contract shall be governed by and interpreted in accordance with the laws of land. The Courts governing the territorial jurisdiction of the Solar Power Project and Evacuation & Transmission System, shall have exclusive jurisdiction in all matters arising under the contract.

3.69. TRANSFER OF OWNERSHIP

3.69.1. The title of the equipment and materials supplied by the Contractor to MAHAPREIT would be transferred to MAHAPREIT upon receiving the goods at site. This Transfer of Title shall not be construed to mean the acceptance and the consequent "Final Acceptance" of equipment and material. The Contractor shall continue to be responsible for the quality and performance of such equipment and material and for their compliance with the specification during the entire period of the performance of the contract.

3.69.2. This transfer of Title shall not relieve the Contractor from the responsibility of all risks of loss and damage to the equipment and material as specified under the Clause No 3.19 of this Bid Document.

3.70. INDEMNITY TO MAHAPREIT

3.70.1. The Contractor shall at all times indemnify and keep indemnified MAHAPREIT against all losses and claims for injuries or damages to any person or property whatsoever which may arise out of consequence of the execution of the works and against all claims, demands, proceedings including civil and criminal, damages, cost, charges and expenses whatsoever in the respect of or in settlement thereto.

3.70.2. The Contractor shall at all times indemnify MAHAPREIT against any claim which may be made under Workmen's Compensation Act or any statutory modifications thereof or otherwise for or in respect of any damage or compensation payable in consequence of any accident or injury sustained by any workman or other person whether in the employment of the Contractor or not.

3.70.3. The Contractor shall at all times keep MAHAPREIT indemnified against all claims, damages or compensation under the provisions of payment of Wages Act, 1936, Minimum Wages 1948, Employees Liability Act 1938, The Workmen's Compensation Act, 1923, Equal remuneration Act-1976, Employment of Child Labor Act –1938, Abolition of bonded labor Act and the Contract Labour (Regulation and abolition) Act-1970 or any other Acts regulating the employment of Labour by Contractor.

3.70.4. The Contractor shall at all times indemnify MAHAPREIT against all claims which may be made in respect of the plant and machinery for infringement of any right protected by patent, registration of design and trade mark. Provided always that in the event of any claim in respect of any alleged breach of patent, registered designs or trade mark made against MAHAPREIT, the same shall be notified to the Contractor and Contractor shall at his own cost either settle any such dispute or conduct any litigation that may arise there from

3.71. LAW PERTAINING TO LABOUR

3.71.1. This contract shall be governed by the various Labour Laws for the time being in force in India or in the state where the project is located. The Contractor shall be responsible for compliance of all applicable central, state & municipal laws, Panchayat Raj Act& rules & legislation in force from time to time at work site & shall be solely responsible to comply with all obligations & payments there under.

3.71.2. No compensation will be entertained for the liabilities arising out of any provision of any act, Law, rules, & legislation in force from time to time pertaining to labour. In case MAHAPREIT is liable to pay any charges/penalty arising out of noncompliance by the Contractor, the same shall be recovered from the Contractor.

3.71.3. The contractor shall provide an updated list of sub-contractors and their laborers every month and ensure that all the payments are made to the Subcontractor/vendors using digital payment methods.

3.72. COMPLIANCE WITH REGULATIONS

3.72.1. Unless otherwise specified, all works / supply, to the extent applicable, shall be carried out in accordance with the Indian Electricity Act, 2003, the Indian Electricity Rules, 1956 or any amendment / order thereof, which may be issued during the currency of the Contract and the requirements of any other Rules, Regulations and Act in India to which the Employer may be subjected to.

3.72.2. The Contractor shall comply with all applicable laws, or ordinances, codes, approved standards, rules and regulations and shall procure all necessary Municipal and Government permits, licenses etc., at his own cost. The Contractor shall leave the Employer and Engineer-in-charge harmless as a result of any infraction thereof.

3.73. REGULATIONS OF LOCAL AUTHORITIES

3.73.1. The Contractor shall, throughout the continuance of the Contract and in respect of all matters arising out of the performance thereof, comply the laws, rules and regulations of the Local Authorities. The contractor shall also comply with the Minimum Wages Act, 1948, Payment of Wages Act 1936, the Contract (Regulation and Abolition) Act 1970 and other Act, Laws, Rules and Regulations applicable in performance of the Contract. All registrations, permissions, inspections, rights etc., required for execution of the Contract shall be arranged by the Contractor himself at his own cost. The Employer will provide the necessary documentary assistance to the extent possible, in obtaining the same. The Employer shall not, be responsible for delay on this account.

3.73.2. If, under any statute/law, any registration, permission, inspection, right etc., is required to be arranged specifically by the Employer, this shall be brought to the notice of the Employer by the Contract along with the Bid.

3.74. NOTICES

3.74.1. Any notice given by one party to the other pursuant to this contract shall be sent to the other party in writing or by E-mail or facsimile and confirmed in writing to the other party's address specified in Contract Document.

3.74.2. A notice shall be effective when delivered or on the notice's effective date, whichever is later.

3.75. ENVIRONMENTAL LAWS

3.75.1. The Contractor shall comply with all applicable codes, laws, rules and regulations relating to actual or potential effect of the activities on and at the project contemplated by executing this project on the environment, the disposal of material,

the discharge of chemicals, gases or other substances or materials into the environment, or the presence of such materials, chemicals, gases or other substances in or on the project.

3.76. DISPOSAL OF SCRAP

3.76.1. The Contractor shall with the agreement of the Employer promptly remove from the site any Scrap' generated during Performance of any activities at site in pursuance of the Contract.

3.76.2. The term 'Scrap' shall refer to scrap/waste/remnants arising out of the unpacking of equipment, construction debris, fabrication of structural steel work and piping work at the project site in the course of execution of the contract and shall also include any wastage of cables during the termination process while installing the cables.

3.76.3. The disposal of such Scrap shall vest with the Contractor for the items supplied by contractor and issued by the Employer under this contract for installation and construction without any adjustment to the Contract Price. The removal of scrap shall be subject to the Contractor producing the necessary clearance from the relevant authorities (Custom, Excise etc.), if required by the law, in respect of disposal of the scrap. The liability for the payment of the applicable taxes/duties shall be that of the Contractor.

3.76.4. The Contractor shall also indemnify to keep the Employer harmless from any act of omission or negligence on the part of the Contractor in following the statutory requirements with regard to removal/disposal of scrap. The Indemnity Bond shall be furnished by contractor as per Format enclosed as Annexure 6 of Section-V: Bid Response Sheets and Annexures). Further, in case the laws require the Employer to take prior permission of the relevant Authorities before handing over the scrap to the Contractor, the same shall be obtained by the Contractor on behalf of the Employer.

3.77. POWER OF ENTRY

3.77.1. In case the Contractor does not execute the work in the manner described in the contract documents or if he shall at any time in the opinion of the Engineer-in-Charge:

a. Fail to operate & maintain the plant in conformity with contract document or
b. Substantially suspend work or the works for a continuous period of 15 days withoutpermission from the engineer in charge, or
c. Fail to carry on and execute the works to the satisfaction of the engineer in charge, or
d. Commit or suffer or permit any other breach of any of the provisions of the contract onhis part to be performed, or
e. If the Contractor abandons the works, or
f. If the Contractor during the continuance of the contract becomes bankrupt.

3.77.2. In any of such events, MAHAPREIT shall have the power to revoke the Contract Agreement to operate and maintain the plant. Contractor shall vacate the project premises immediately and shall have no right of entry thereafter. MAHAPREIT will de-facto control the plant, materials, spares, equipment, tools, stocks etc. and continue to have access to common facilities thereon.

3.78. VACATION OF THE PROJECT PREMISES AFTER EXPIRY OF TERM

3.78.1. After the expiry of the period of contract or extension thereof as the case may be, Contractor shall ensure that the plant is in operationally fit and running condition.

3.78.2. While vacating the project premises, Contractor shall hand over all technical documents, literature, and instruction manuals, lists of spare parts, tools & tackles etc. Contractor shall also hand over all the relevant record/documents.

3.79. SCHEDULING AND FORECASTING

3.79.1. The contractor shall be responsible for scheduling & forecasting on behalf of the Employer as specified elsewhere in the Contract documents, to comply with statutory requirements, Regulations, Orders etc as per applicable Regulations, guidelines, Orders etc issued by CERC/SERC/STU/CTU/SLDC /designated agencies. Contractor shall provide Communication Connectivity of pooling station to STU/CTU Grid for the purpose of scheduling & forecasting.

3.80. DEFECTS/ NON-ACHIEVEMENT OF PLANT DEPENDABLE CAPACITY AT THE TIME OF VACATING PROJECT PREMISES

3.80.1. In order that the Contractor could obtain a Vacation Certificate, he shall rectify any defect / non- achievement of plant dependable capacity in accordance to the norms of manufacturer arising from the defective Operation & maintenance practices or noncompliance of Prudent Utility Practices or that may have been noticed or developed during/ after the project premises has been vacated, the period allowed for carrying out such works will be normally one month. If any defect could not be remedied or plant dependable achievement capacity in accordance to the norms of manufacturer could not be achieved within a reasonable time, MAHAPREIT may proceed to do the work at Contractors risk and cost and recover such amount, as may be decided by MAHAPREIT from any amount due. Non-realization of such amount shall not debar MAHAPREIT to recover the amount through Court of Law.

3.80.2. All the aforesaid safeguards /rights provided for MAHAPREIT shall not prejudice its other rights/remedies elsewhere provided herein and/or under law.

3.81. GRAFTS AND COMMISSIONS ETC

3.81.1. Any graft, commission, gift or advantage given, promised or offered by or on behalf of the Contractor or his partner, agent, officers, director, employee or servant or any one on his or their behalf in relation to the obtaining or to the execution of this or any other contract with the Employer, shall, in addition to any criminal liability which it may incur, subject the Contractor to the cancellation of this and all other contracts and also to payment of any loss or damage to the Employer resulting from any cancellation. The Employer shall thus be entitled to deduct the amounts so payable from any monies otherwise due to Contractor under the contract.

3.82. CORRUPT AND FRAUDULENT PRACTICE

3.82.1. “Fraudulent Practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Employer 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 the Employer of the benefits of free and open competition.

3.82.2. "Corrupt Practice" means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution.

3.82.3. “Collusive practice” means a scheme or arrangement between two or more Bidders, with or without the knowledge of the Employer, designed to establish bid prices at artificial, non- competitive levels.

3.82.4. “Coercive Practice” means harming or threatening to harm, directly or indirectly, persons or thereto influence their participation in the procurement process or affect the executive of a contract.

3.83. LIMITATION OF LIABILITY

3.83.1. Except in cases of criminal negligence or wilful misconduct,

a) the Contractor shall not be liable to the Employer, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the contractor to pay liquidity damages to the employer and

b) the aggregate liability of the Contractor to the employer, whether under the contract, in tort or otherwise, shall not exceed the total contract price, provided that this limitation shall not apply to any obligation of the contractor to indemnify the employer with respect to patent infringement.

*********END OF SECTION********

SECTION-IV

TECHNICAL SPECIFICATIONS

PART-B OF TECHNICAL SPECIFICATION

(Getting desired connectivity and Construction of 33KV Transmission Line from the land parcel to nearest sub-station including construction of bay(s) at the Sub-station end)

CHAPTER-1

1.1.1 Scope of work Land Development and Power Evacuation works with 33KW substation for 3 MW Solar Power Project on land at Kelapur, Taluka Wardha, District Wardha for National Cancer Institute Nagpur, which includes land cutting & filling, removal of shrubs, trees, bushes etc., & providing of internal roads and drainage with Power Evacuation & Transmission Infrastructure up to Inter Connection Point of STU.

1.1.2 The contractor has to identify the Pooling substation for inter-connection of Transmission Line. Obtaining connectivity as per State Solar Policy/connectivity regulation shall be the responsibility of bidder.

1.1.3 The contractor has to make power evacuation arrangement and integration to and with the 33 KV pooling substation in Solar project via overhead transmission line at substation and connection with all necessary infrastructure including bay construction at pooling substation.

1.1.4 The contractor shall submit detailed time schedule of activities, construction methodology, and resources he intends to use to complete the whole work within 12 months from the date of LoA and the timelines to be provided by the purchaser during detailed engineering.

1.1.5 The contractor shall undertake Detailed Survey, Check Survey, Route Alignment, & Soil Investigation of the possible route and submit complete Survey Report, Pole Schedule, BoQ along with pole Design Criteria, Sag Tension Calculations, Sag Templates, Pole Spotting Data, and Soil Investigation Report etc. using latest survey techniques and line spotting/ optimization software for approval of the purchaser.

1.1.6 The contractor or it's sub-contractor shall supply the proven design of Evacuation system for which he will submit the structural drawings, type test reports, bill of materials (B.O.M.) etc. at the time of detailed engineering for the acceptance of purchaser, before proceeding ahead with the manufacturing.

The contractor or it's sub-contractor should have valid IPR for use of such tower design, type test reports, foundations and any other data he intends to use in this project.

1.1.7 In special case, where he may have to undertake new design of suitable transmission line / structures as per the design parameters given in relevant IS code, for the line and submit the design and report in three copies to the purchaser for obtaining provisional approval. On obtaining such approval of the above designs, the contractor shall develop suitable structural drawings, shop drawing, bill of materials (B.O.M.) etc. and carry out proto test and/or full-scale tower testing and submit the complete drawings and B.O.M in three copies of each to the purchaser for obtaining final approval. On obtaining such approval the contractor shall submit the drawings, bill of materials & shop drawings etc. in six copies as well as soft copies to the purchaser. Design, development of structural drawing, B.O.M, shop drawings etc. for special structures including crossing towers are also included in the scope of the Contract. Therefore, this special case shall not have any additional financial or time implication to the purchaser in the execution of the work.

1.1.8 The contractor shall undertake design or use already proven design of suitable foundations for all types of towers including special towers and structures with strengthened cross-arms under different soil conditions / parameters and variation in groundwater level, namely – dry, wet, semi submerged and submerged condition depending upon the sub-soil investigation conducted by him. This contract also covers design and drawing of deep foundations (bored piles of uniform diameter/RCC raft) as may be necessary from the prevalent site condition. The contractor may engage the services of an agency (ies) for carrying out special river crossing foundations (pile foundation), if required, described in

the scope as above, taking due approval from the purchaser. However, the agency so engaged must have experience of construction of such foundations, in line with Sub-vendor selection criteria mentioned in this specification.

The contractor shall then submit suitable drawings for foundation of poles, evacuation line and substation under such condition to the purchaser along with detailed calculation for acceptance and release of the drawings for execution. The contractor shall submit three copies of the accepted design and drawings along with soft copy in AutoCAD format (latest version).

1.1.9 The contractor shall identify and quantify various items of work involved in the job under this contract, including open excavation in foundation pits, concreting, reinforcement etc. on the basis of the approved detail survey and soil investigation.The scope of this contract includes fabrication, galvanizing, supply and complete execution of the 33 kV power evacuation transmission line on pole structures up to the interconnecting substation, including all associated materials such as nuts and bolts, washers, cleats, step bolts, U-bolts, D-shackles, hangers, clamps, jumpers, conductor accessories and hardware fittings, and their erection at site.The scope further includes fixing of insulators and all line hardware, stringing, sagging and tensioning of 33 kV conductors and earth wires, along with all necessary conductor and earth wire accessories, and supplying and fixing of anti-climbing devices, earthing devices, phase plates, number plates, danger plates, step bolts, pole identification plates and all statutory safety fittings on each pole structure.This contract also includes the supply and application of zinc-rich paint on bolts and metal parts wherever tack welding is required, up to the specified height as stated in the tender.The erection scope shall also include excavation, backfilling, shoring and shuttering, dewatering, disposal of surplus soil, pole stub-setting, concreting of foundations, reinforcement placement, and execution of protection works wherever required, strictly as per approved drawings and relevant technical standards.The scope further includes fabrication, galvanizing, supply and erection of all special pole structures, terminal poles, angle poles, dead-end poles, road-crossing and river-crossing poles, including ladders, platforms, danger boards and safety fixtures.The construction of isolated shallow foundations and / or deep foundations (uniform diameter bored piles / RCC raft) for poles, wherever required as per site soil conditions, is also fully covered under this contract.

1.1.10 AAAC conductors, OPGW ground, vibration dampers and mid – span compression joints for conductor and ground wire, repair sleeves for ACSR/AAAC/AL59 conductor, ground wire suspension /tension clamps, flexible copper bonds, insulators, hard wares for insulator strings complete shall be supplied by the contractor.

1.1.11 All materials such as cement, reinforcement steel, fine and coarse aggregates, earthing materials, all materials required in foundation and protection work shall be included in the contractor's scope of supply.

1.1.12 The ROW for the overhead Transmission Line shall be obtained prior to the construction of the line from the concerned authorities. Right-of-way for transmission lines of different voltage levels (with specific conductor type and configuration, design span and string arrangement) traversing through normal terrain or route without constraint, forest area, urban area, populated area and approach section near substation shall be as per SCHEDULE-VII of Central Electricity Authority (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations, 2022.

1.1.13 The bay construction, if required, at STU substation is in the scope of the bidder. **The bay construction works shall be carried out inline with requirement of STU / other concerned authority**. The total cost including applicable consultancy charges (if any) for the same shall be borne by the bidder. If the bay construction work is carried out by the STU then the cost of the same shall be borne by the bidder.

However, Bank Guarantee (if any) to STU shall be submitted by SGEL.

If bay is already available with STU, then payment for the same to STU shall be borne by bidder and modifications/retro fitting, if required to be carried out shall be done by bidder

If the bay execution work is not carried out by STU, it shall be the responsibility of bidder for the execution of bay work along with complete integration of Transmission Line with STU system following the applicable standards/latest Technical Standard for Construction of Substation and Switchyard published by CEA / requirement of STU / other concerned authority as per requirement. All charges payable for the bay related works and co- ordination with STU shall be in bidder's scope.

The coordination works, interface systems, software/hardware, other requirements as required for completeness of project are included in bidder's scope. All equipment/hardware required for termination as well as equipment support

structures and civil works for completing the connectivity of the system up to interconnection point is in the scope of the bidder.

1.1.14 Scope of this contract also includes connection between the dead-end tower of the transmission line and the respective sub-station gantry structure at both ends of the line and contractor may have to execute also change of bay related work at sub- station or stringing of new circuits on multi-circuit towers either partially energized or un-energized line, if required, by following appropriate SOP's for the same.

1.1.15 The scope of this specification also covers completion of transmission line and bay construction works at pooling substation in all respect up to the satisfaction of the purchaser. On completion of the job the contractor shall arrange for testing and successful commissioning of the line / cable / bay. For such purposes the Contractor shall extend all necessary services with his men, materials and equipment's without any extra cost to the purchaser. Materials and components not specifically stated in the specification but which are necessary for commissioning and satisfactory operation of the transmission line unless specifically excluded shall be deemed to be included in the scope of the specification and shall be supplied without any extra cost. All similar standard components /parts of similar standard equipment provided, shall be inter-changeable with one another.

1.1.16 All equipment, materials and services whether explicitly stated in Technical Specifications or otherwise and that are necessary for the successful commissioning of Transmission Line as per latest statutory regulations/procedures issued by bodies like CERC, CEA, SLDC/NLDC, STU/MSETCL, MNRE, other Ministry etc. shall be deemed to be included in the scope of work of the Contractor.

Note: The scope of work for Power Evacuation System referred above shall be done by bidder/contractor or its sub-contractor (if any) as per provisions of the bid document.

1.2 Design Consideration

a) The project capacity and configuration/voltage level of Transmission line shall be based on the corresponding land area as tabulated below :-

Sr No	Land Area	Project Capacity	Transmission Voltage Level
1	15 Acre	3MW	33KV

b) Transmission line shall be designed for *Ambient temperature. Ambient temperature shall be obtained from the India Meteorological Department (IMD), Pune (Ministry of Earth Sciences, Government of India) website.

***Ambient temperature means: maximum temperature recorded for the location by adding a margin of 1℃ and rounded off to the nearest higher integer**

c) Maximum length of transmission line shall be of 11 KMS from switchyard of solar power plant to interconnecting substation.

1.3 Connectivity

Bidders must submit the details of Connectivity with STU substation(s) according to the selected land parcel location. For interconnection with the STU and metering, bidder shall abide by STATE Solar Policy/ connectivity regulation

The Bidders are free to choose the STU substations near Land location for Interconnection with STU. While doing so, the Bidders can opt for connectivity at STU Sub-station.

Bidder shall submit connectivity application to STU, based on the applicable connectivity norms. Bidder shall bear the statutory charges to be paid for connectivity application However, employer shall reimburse the statutory charges for connectivity (only first application) on production of receipts/invoice. Employer shall not be liable if connectivity is not granted by STU due to any reason (like non-availability of margin/capacity in the substation

identified by bidder).

If bidder changes the STU substation for connectivity (subject to such changes are allowed by the regulations), Bidder shall submit new connectivity application. However, the statutory fee for such revised/new connectivity application shall be borne by bidder. In all cases, obtaining connectivity shall be the responsibility of bidder.

After obtaining connectivity approval from STU, it shall be bidder's responsibility for complete co-ordination for works from Land location to STU substation including R.O.W, transmission line route survey, collecting bay allocation details including its capacity/ratings before entering into STU substation as per applicable connectivity regulation requirements, inputs for prior approval under section 68(1) if applicable, subsequent approval under section 164 if intended by bidder, line termination and associated works. Cost associated with all these works shall be borne by bidder. Any co-ordination works with STU/ MSETCL / MSEDCL / any other statutory body as required shall also be the responsibility of bidder

The LTA shall be obtained for period of 25 years from the scheduled commissioning date of solar project (to be intimated separately after award of contract).Bidder shall be liable to pay the LTA charges as per the project capacity proposed. The liability of LTA charges, if any, up to the Scheduled Commissioning Date of the Solar Project, shall be borne by bidder.

1.4 General

1. The transmission system planning shall be done in accordance with Central Electricity Authority's "Manual on Transmission Planning Criteria".
   a) The transmission line shall be designed and constructed to give a life of not less than thirty-five years and shall be as per the connectivity requirements.
2. The capacity of transmission system from solar plant to STU substation shall comply with connectivity regulations and procedures.
3. The bidder shall quote for the complete work of design, fabrication, galvanizing, testing, supply and erection of Poles, bay construction works, stringing, testing and commissioning of the line complete, along with construction of foundations, wherever necessary, complete in all respect, failing which the tender shall not be considered. Since this is a short time contract, the rates quoted against the tentative provisions of the items mentioned in the bidding schedule, shall remain unaltered, i.e., no price escalation shall be allowed, and shall be applicable for the final quantities arrived at after purchase's approval of the check survey carried out by the contractor, along with soil investigation.
4. The present section describes the general specification and requirements for the HV transmission line. Design, construction and testing of all equipment, facilities, components and systems shall be in accordance with various statutory rules and regulation of Central Electricity Authority (CEA), national and international codes and standards, and as per best industry practices. It shall also be ensured that all related acts, laws, rules and regulations currently in force in India and as amended from time to time are being followed for the works.

1.5 CODES AND STANDARDS:

All major components supplied under this contract shall confirm to latest relevant IEC standard and whenever applicable relevant BIS standards.

Sr. No.	Parameter	33KV
1.	Nominal system voltage (KV) :	33
2.	Maximum system voltage (KV):	36

The design, fabrication, galvanizing, testing, erection procedure and materials to be used for

3.	System Groundings :	Effectively Earthed
4.	Lightening impulse withstand voltage (1.2/50 micro sec) (kVp)	170
5.	Power frequency withstand voltage under dry condition (kVrms)	70

manufacture and erection of towers, design and construction of foundation and also for manufacture of conductor, conductor accessories, insulator, insulator hardware. Earth wire and accessories etc. shall conform to the ***Indian Standards (IS) as amended till date of issue of invitation of bidder taking up the actual work whichever is later.*** Equivalent International Standards will also be applicable. In the event of supply of materials, equipment etc. conforming to standards other than specified, the Bidder shall confirm in the bid that these standards are equivalent to those specified.

1.6 ELECTRICAL SYSTEM DATA:

Description of all necessary items needed for power evacuation line

1. RSJ 152×152, 11 m

Heavy-duty rolled steel joist pole used as a primary support structure in 33 kV overhead lines. Suitable for straight runs, angle locations (up to moderate angles), and section poles.

2. RSJ 116×100, 10 m

Medium-strength steel joist used for smaller support structures, auxiliary switch gears, outdoor equipment stands, or minor extension structures.

3. MS Channel 100×50×6 mm

Medium-weight steel channel used for cross-arms, equipment supports, braces, and mounting of insulators on poles and gantry structures.

4. MS Channel 75×40×6 mm

Light-duty channel used for small cross-arms, support extensions, signal mounting brackets, and secondary structure strengthening.

5. 33 kV Top Fitting

A complete hardware set mounted at the pole top for attaching insulators and conductor supports. Provides mechanical connection between pole and conductor hardware.

6. MS Angle 50×50×6 mm

Used in fabrication of bracings, supports, frames, and auxiliary structural components in line and substation works.

7. MS Flats (50×10 mm)

Flat steel strip used in clamps, earthing connections, steel fabrication, and reinforcement of structures and equipment bases.

8. 33 kV Pin Insulators With G.I. Pins

Insulators mounted on pin-type cross-arms for supporting 33 kV conductors on straight-line sections. GI pins provide mechanical anchoring to cross-arms.

9. 11 kV Disc Insulator, 70 kN

High-tensile disc insulators used for tension or angle points in overhead lines. Provides mechanical strength and electrical insulation during turning/tension points.

10. G.I. Nut Bolts

Hot-dip galvanized fasteners used for assembling channels, angles, clamps, and equipment. Rust-resistant for long-term outdoor use.

11. Strain Hardware for DOG/AAAC

Includes tension clamps, U-bolts, shackles, and fittings required to anchor and tension AAAC/DOG conductors at dead-ends and angle locations.

12. AAAC 100 mm^2

All Aluminum Alloy Conductor used as the main 33 kV overhead transmission conductor. Offers good conductivity, corrosion resistance, and lower sag.

13. H.T. Stay Set

Complete stay assembly including plate, rod, bow, thimble, and nut used for anchoring poles at angle or dead-end points to ensure stability.

14. G.I. Stay Wire 7/4 mm (8 SWG)

Galvanized steel stranded wire used for tying stay rods to stay anchors. Provides required mechanical stability to poles.

15. G.I. Wire 8 SWG / 6 SWG

Used for guarding against snapping conductors, earthing connections, binding, and small fabrication support works.

16. Sleeve Joints

Compression sleeves used for joining AAAC conductors to ensure strong, low-resistance electrical connection.

17. Danger Board in Yard

Warning signage installed on poles and structures to alert personnel about the presence of high-voltage equipment.

18. Earthing Sets H.T.

Earthing electrodes, GI strips, and connections for ensuring safe grounding of poles, structures, equipment, and surge protection devices.

19. Concreting Ratio 1:3:6

Standard foundation concrete mix used for pole foundations, equipment structures, and stay anchors for adequate strength and durability.

20. G.I. Barbed Wire 'A' Type

Used for providing anti-climbing protection on poles and fencing around substation yards.

21. Black Bituminous Paint

Applied to steel portions buried in soil to protect them from corrosion and moisture damage.

22. Red Oxide Paint (2 Coats)

Primer applied to all steel structures before final painting to enhance adhesion and prevent rusting.

23. Aluminium Paint (1 Coat)

Final protective layer on steel structures that provides long-term anti-corrosion protection and improves aesthetic appearance.

24. Sundries

Includes miscellaneous materials required on-site such as washers, ropes, nuts, bolts, binding wire, insulation tapes, and small consumables.

25. Wedge Connectors

Mechanical connectors used to join two overhead conductors without cutting or stripping, ensuring strong, maintenance-free joints.

26. DOG to DOG or Equivalent AAAC

Conductor connectors used for joining DOG conductors or equivalent AAAC conductor sections during line erection.

27. RSJ 152×152, 13 m

Longer RSJ pole used for special applications such as gantry structures, long-span crossings, or locations requiring extra clearance.

28. MS Channel 75×40×6 mm

Used again for lightweight bracing, small equipment supports, and fabrication of auxiliary structures.

29. MS Channel 100×50×6 mm

Used for heavier equipment mounts, V-cross arms, and strengthening of main steel supports.

30. MS Angle 50×50×6 mm

Structural angle used for cable racks, support frames, clamps, earthing supports, and miscellaneous steel works.

31. MS Flat 50×6 mm

Used in fabrication of clamps, earthing conductor supports, and reinforcement of foundation structures.

32. 33 kV Isolators With Earth Blade (800 A)

High-voltage isolator switch with integrated earth blade used for safe isolation and earthing of 33 kV feeders during maintenance.

33. 33 kV Pin Insulators with G.I. Pins

Once again used for overhead line conductor support on pin-type structures for straight sections.

34. AAAC 100 mm^2

Same as item 12; used as the FEEDER conductor.

35. XLPE Cable 33 kV, 3C / 300 mm^2

High-voltage underground cable used for crossings, connections to substation equipment, railway/RCC crossing, and feeder terminations.

36. RCC Pipe 150 mm, 2 m

Reinforced concrete pipe laid underground to protect XLPE cable during road/railway crossings and avoid mechanical damage.

37. Black Bituminous Paint

Provides anti-corrosion protection on steel surfaces in contact with soil.

38. Red Oxide Paint (2 Coats)

Anti-corrosive primer coating applied before aluminum paint.

39. Aluminium Paint (1 Coat)

Final bright protective paint for all exposed steel.

40. 33 kV Heat Shrink Outdoor Termination Kit (3C × 300 mm^2)

Used to terminate 33 kV underground cable at outdoor equipment such as VCB, PT, CT, Isolator, or Transformer.

41. Sand

Used as first-layer cushioning around underground cables to prevent mechanical damage.

42. Misc. for XLPE U/G Cable

Includes cable clamps, route markers, danger plates, HDPE/GI pipes, warning tiles, and cable jointing accessories.

43. 33 kV Feeder Bay With Gantry Structure & PT

Complete bay including gantry steel, CT/PT, isolators, lightning arrestors, VCB, structures, clamps, connectors, and civil foundations.

44. Cost Data – 33 kV S/C Line Pin type (100 mm^2 AAAC on 152x152 mm RSJ)

Standard BOQ for erecting single-circuit 33 kV overhead line using AAAC and RSJ poles.

45. 33 kV 3×300 mm² XLPE Underground Cable for Railway Crossing

Special protected cable installation complying with railway rules using RCC pipes and sand cushioning.

46. Double Pole Structure (Cut Point) of 33 kV line using 11 m RSJ 152×152

Double-pole support used for switching, tee-off, line sectioning, and mounting of isolators or lightning arrestors.

47. Single Pole Cut Point Structure for 33 kV line on 13 m RSJ

Single tower structure for line sectionalizing, small switching points, and simple line isolations.

48. 33 kV Lightning Arrestors (Station Type)

Protects equipment from over-voltage surges due to lightning or switching operations.

49. 33 kV Isolators Without EB (800 Amp.)

Used for isolating parts of the system for maintenance but without earth blade mechanism.

50. 33 kV VCB Complete, 1600 Amp (Outdoor)

Outdoor vacuum circuit breaker used for switching and protecting feeders against faults such as overcurrent/earth fault.

51. 33 kV Potential Transformer

Step-down device for providing accurate voltage signals to meters and protection relays.

52. CT 200–100/1–1 A, 33 kV

Current transformer for measuring/monitoring current and feeding protection relays.

53. C&R Panel for 33 kV Feeder Breaker

Control and relay panel that houses numerical relays, meters, annunciators, control switches, and wiring for the VCB.

54. Marshalling Box

Protective enclosure for housing CT/PT/LA terminal cables, marshalling wiring, and connection blocks.

55. Structure & Foundation Cables, Clamps, Painting (A+C+D+F)

Includes all steel structures, clamps, foundations, painting and finishing works for complete bay, gantry, and pole structures.

56. Earthing as per Table (E)

Complete earthing system including earthing pits, GI strip, earth electrodes, connections to equipment, and resistance compliance testing.

1.7 DRAWING AND BILL OF MATERIALS:

The contractor shall submit existing detailed structural drawings and Bills of Materials (BOM) for individual poles / bays / associated structures for approval of the purchaser. Where such drawings are not already available, the contractor shall develop new detailed drawings and BOM and submit the same in hard copy for purchaser's approval. In special cases, where prototype inspection has not been carried out earlier, the contractor shall arrange for prototype inspection of pole, bay, land-related structures and all associated items, at no extra financial implication to the purchaser. After completion of prototype inspection, the contractor shall submit the prototype-corrected drawings and BOM for final approval of the purchaser.Mass production of structures shall be commenced by the vendor only after obtaining formal acceptance of the approved drawings and BOM from the purchaser.

1.8 SERVICES TO BE PERFORMED BY THE EQUIPMENT BEING FURNISHED:

i The equipment furnished under this specification shall perform all its functions and operate satisfactorily without showing undue strain, restrike etc. under over voltage conditions.

ii All equipment's/material shall also perform satisfactorily under various other electrical, electromechanical and meteorological conditions of the site of installation.

iii All equipment shall be able to withstand all external and internal mechanical, thermal and electromechanical forces due to various factors like wind load, temperature variation, ice & snow, (wherever applicable) short circuit, seismic forces etc. for the equipment.

1.9 TYPE TESTING & INSPECTION:

A. TYPE TESTING:

All equipment, being supplied should have been type tested within past **ten (10)** years from the date of notice inviting bids as per technical specification and shall be subject to routine tests in accordance with requirements stipulated under respective sections.

In case of non-availability of valid type test certificates, the contractor will have to perform the type tests without any additional financial implication to the purchaser or time delay in the execution of the work.

B. INSPECTION:

i. The inspection of materials shall be carried out as per the relevant Indian Standards at the Manufacturer's Works according to all acceptance tests.
ii. The testing charges for inspection shall be borne by the contractor.
iii. All charges of purchaser's personnel shall be borne by the purchaser.
iv. If the testing facilities are not available at the manufacturer's works than same shall be carried out at third party laboratory at no extra cost to the purchaser.
v. The contractor shall replace the materials if not found as per the specific requirements at no extra cost to the purchaser, including testing charges if any.
vi. The contractor shall intimate the date for inspection well in advance i.e. at least 7 days before to enable purchaser to depute his representative for inspection.
vii. Although the materials have to be supplied as per IS and or as per the tender specifications, purchaser reserves right to take sample of any material from the lot received at site and get the same tested as per IS at third party laboratory. The materials should pass the tests and if the material fails, the entire lot will be rejected and contractor should make immediate arrangement for replacement with fresh materials and after getting them duly inspected. Rejected /defective material if found during inspection shall be destroyed in presence of purchaser's representative.

1.10 Sub Vendor Selection Criteria:

After award of work, the contractor shall submit the details of sub-vendors based on criteria specified below along with relevant supporting documents for review of purchaser, before awarding the contract to his vendor.

1.	Conductor Polymer Insulators Hardware Fittings	**A.** The sub-vendor should be in the approved vendor list of all or any of the following organizations (including their subsidiaries): 1. PGCIL 2. NTPC 3. Indian Railways 4. State Transmission Utilities. **B.** The equipment should have been supplied to above organizations in the past seven (7) years and should be in successful operation for at least two (2) years from the date of NIT. **C.** The contractor shall furnish necessary documents establishing the above criteria.

1.11 Route Selection

a. The environmental impact of the transmission lines is not expected to be far- reaching and mostly localized within the right of way (ROW). However, there are likely to be some effects on natural and socio-culture resources. These impacts can be minimized by a careful route selection. Preliminary survey shall be carried out to determine the possible options of the transmission line routes from the plant substation to the grid connectivity points. The route selection criteria have been selected as below:

b. The alignment of the transmission line shall be most economical with respect of construction and maintenance.

c. The routing of transmission line shall not disturb the reserve forest area or areas having large trees.

d. The line routing shall avoid large habitation and densely populated areas to the extent possible.

e. The number of angle points shall be kept as minimum as possible.

f. The angle point shall be selected in such a way that shifting of the point within 100m radius is possible at the time of construction.

g. The crossing of power lines shall be aligned, and the alignment shall be kept at a minimum distance of 300m from power lines to avoid induction problems on the lower voltage lines.

h. All alignments shall be easily accessible both in dry and rainy seasons to enable maintenance throughout the year.

i. The alignment of transmission line along the road shall be kept at about 50-60m away from toe of existing dam for safety and cost optimization purpose.

1.12 Operational Aspects

a. The following issues shall be addressed in the transmission line design to ensure that the line meets the operational requirements of the network:

b. Thermal rating – phase conductors and maximum operating temperature shall be selected to minimize annealing and maximize conductor life. All lines shall maintain statutory ground clearances at the maximum design operating temperature.

c. Fault Currents – current, future and ultimate fault levels should be considered in selection of conductors and ground wire to ensure they are adequately rated.

d. Lightning Performance – the lightning performance of a transmission line shall be managed through control of ground wire shielding angle, structure earth resistance and insulation level to achieve the lightning outage rates.

e. Right of way (ROW) width as per IS 5613 shall be provided to ensure standard safety clearances under high wind conditions. Demarcation of the ROW ensures an area where vegetation heights can be controlled and provides ease of access for ongoing maintenance and repairs.

1.13 Clearances

a. At all important road crossings, ground clearance of the conductor from the road surfaces as per prevailing regulations.

b. Crossing of railway lines shall be as per prevailing regulations (revised in 1987).
c. Suitable type of suspension/ tension tower shall be used for river crossings.
d. Where the proposed line is likely to cross over another line of the same voltage or lower voltage, type 'A' tower with suitable extensions shall be used. Provisions to prevent the possibility of its coming into contact with other overhead lines shall be made in accordance with the Indian Electricity Rules, 1956 as amended up to date.
e. Clearance from ground, buildings, trees, and telephone lines shall be provided in conformity with the Indian Electricity Rules, 1956 as amended up to date.

1.14 Structural Design

General requirements:

a. The mechanical and structural design shall ensure that the line performance will comply with all relevant IEC/ IS standards, can be readily constructed and maintained using standard industry practices and tools, and routine maintenance can be carried out without loss of supply.
b. The design shall ensure premature failure of components does not occur from fatigue stresses, abrasion or corrosion or other serviceability conditions that will be encountered within the design life of the line.
c. Design of structures and footing shall meet the requirements specified in IS 802 and IS 456 respectively, to ensure that the line is suitable for its intended purpose and to ensure acceptable levels of safety for construction, maintenance and operation.

Loadings

a. Structures shall be designed to meet the loading requirements specified in IS 802 as the minimum including, but not limited to, the following load cases:
b. Wind loads calculated in accordance with IS 875 (Part III) in conjunction with other relevant codes and standards to achieve system security levels required.

Structure and design

a. Structure design shall comply with the requirements specified in IS 802.

Footing design

a. Footing design shall comply with the requirements specified in IS 456, IS 2911 and other referenced codes and standards as applicable.
b. The foundation shall be designed for all soil strength conditions likely to be experienced over the design life of the line due to effects such as a fall or rise in the water table (including flooding) and erosion of nearby soil. The effect of long term and short-term load conditions on soil strength should also be considered.
c. Geotechnical investigation shall be carried out to determine the soil parameters for design of footings.

1.15 Pole Foundation

a. The pole foundations shall generally be of direct embedded type, RCC pad footing type or chimney type, and shall be classified as dry, wet, partially submerged (PS), fully submerged (FS), wet black cotton soil (WBS), sandy soil, dry fissured rock, wet fissured rock, hard rock, etc., depending upon the type of soil encountered at site. The foundations shall be designed accordingly based on relevant Indian Standards and approved utility guidelines.
b. At river crossing locations, waterlogged areas, marshy land, or locations having poor soil bearing capacity, wherever required, deep pile foundation / well-type foundation / RCC raft foundation for poles shall be adopted. The foundation design shall be strictly based on detailed geotechnical investigation and soil test reports to be carried out prior to execution of the works.

1.16 Conductor

c. Single ACSR / AAAC / AL-59 aluminum conductor per phase shall be used for the proposed 33 kV overhead power evacuation line for evacuation of generated power, designed for:

Voltage variation: (+10%) to (–10%)
Frequency variation: (+3%) to (–5%)
Power factor range: 0.85 lag to 0.95 lead
The conductor shall conform to the latest applicable IS / IEC standards for 33 kV distribution and sub-transmission lines.
The aluminum strands shall be hard-drawn from electrolytic aluminum rods of purity not less than 99.5%, with copper content not exceeding 0.04%, and shall conform to IS 398 (Part II / IV / V) as applicable for ACSR / AAAC / AL-59 conductors.
he galvanized steel core wires (for ACSR conductors) shall be zinc-coated by the hot-dip galvanizing process in accordance with IS 4826 (latest revision).
Zinc used for galvanizing shall be of electrolytic high-grade zinc with minimum purity of 99.95%, conforming to IS 209 (latest edition).
The finished conductor shall be smooth, compact, uniform and free from all defects,

1.17 Insulators

a. It is proposed to use composite long rod insulators for the transmission line.
b. The insulators of the strings shall comprise standard long rod insulators with normal sheds for a three phase, 50Hz, effectively earthed transmission system in a heavily polluted atmosphere. Insulators shall be long rod type with ball and socket connections.
c. Insulators shall have normal sheds/ alternate sheds with good self-cleaning properties. Insulator shed profile, spacing projection etc. shall be strictly in accordance with IEC standards.
d. The vendor shall also submit certified test report for an accelerated ageing test.
e. The size of long rod insulator, the number to be used in different type of strings, respective electromechanical strengths of insulator string along with hardware fittings shall be as indicated in Table below.

1.18 Line Accessories

Mid-span compression joints for conductor

Mid span compression joints suitable for conductor shall be used for joining two lengths of conductor. The minimum slipping strength of the joint after compression shall not be less than 95% of the UTS of conductor.

Repair sleeves for conductor

Repair sleeve shall be used only for repairing not more than two standards broken in the outer layer of the conductor. It shall be of compression type in two parts.

Vibration damper for conductor

Stockbridge vibration dampers shall be used to reduce the maximum dynamic strain caused by aeolian vibration to a value of 150 micro-strain.

Earthing

The tower footing resistance shall be kept below 10ohms. Pipe type or counterpoise earthing shall be used to bring the tower footing resistance down to the acceptable level.

1.19 PACKAGING & PROTECTION:

All the equipment's shall be suitably protected, coated, covered or boxed and crated to prevent damage or deterioration during transit, handling and storage at Site till the time of erection. On request of the Purchaser, the Contractor shall also submit packing details/associated drawing for any equipment/material under his scope of supply, to facilitate the Purchaser tore-pack any equipment/material at a later date, in case the need arises. While packing all the materials, the limitation from the point of view of availability of Railway wagon/ Road sizes in India should be taken into account. The Contractor shall be responsible for any lossor damage during transportation,

handling and storage due to improper packing. Any demurrage, wharfage and other such charges claimed by the transporters, railways etc. shall be to the account of the Contractor. Purchaser takes no responsibility of the availability of the wagons.

All coated surfaces shall be protected against abrasion, impact, discolouration and any other damages. All exposed threaded portions shall be suitably protected with either a metallic or a non-metallic protecting device.

1.21 FINISHING OF METAL SURFACES:

All metal surfaces shall be subjected to treatment for anti-corrosion protection. All ferrous surfaces for external use unless otherwise stated else where in the specification or specifically agreed, shall be hot-dip galvanized after fabrication. High tensile steel nuts& bolts and spring washers shall be electro galvanized to service condition4. All steel conductors including those used for earthing/grounding (above ground level) shall also be galvanized according to IS:2629.

1.22 HOT DIP GALVANIZING:

The minimum weight of the zinc coating shall be 610 gm/sq.m and minimum thickness of coating shall be 85 microns for all items thicker than 6mm. For items lower than 6mm thickness requirement to coating thickness shall be as per relevant ASTM. For surface which shall be embedded in concrete, the zinc coating shall be 610 gm/sq.m minimum.

The galvanized surfaces shall consist of a continuous and uniform thick coating of zinc, firmly adhering to the surface of steel. The finished surface shall be clean and smooth and shall be free from defects like discolored patches, bare spots, unevenness of coating, spelter which is loosely attached to the steel globules, spiky deposits, blistered surface, flaking or peeling off, etc. The presence of any of these defects noticed on visual or microscopic inspection shall render the material liable to rejection.

After galvanizing, no drilling or welding shall be performed on the galvanized parts of the equipment excepting that nuts may be threaded after galvanizing. Sodium dichromate treatment shall be provided to avoid formation of white rust after hot dip galvanization.

The galvanized steel shall be subjected to six one minute dips in copper sulphate solution as per IS-2633.

Sharp edges with radii less than 2.5 mm shall be able to withstand four immersions of the Standard Preece test. All other coatings shall with stand six immersions. The following galvanizing tests should essentially be performed as per relevant Indian Standards.

- Coating thickness
- Uniformity of zinc
- Adhesion test
- Mass of zinc coating

Galvanized material must be transported properly to ensure that 107ulfil107dal surfaces are not damaged during transit. Application of zinc rich paint at site shall not be allowed.

1.23 PAINTING:

All sheet steel work shall be degreased, pickled, phosphate in accordance with the IS- 6005 “Code of practice for phosphating iron and sheet”. All surfaces, which will not be easily accessible after shop assembly, shall before hand be treated and protected for the life of the equipment. The surfaces, which are to be finished painted after installation or require corrosion protection until installation, shall be shop painted with at least two coats of primer. Oil, grease, dirts and swaf shall be thoroughly removed by emulsion cleaning. Rust and scale shall be removed by pickling with dilute acid followed by washing with running water, rinsing with slightly alkaline hot water and drying.
After phosphating, thorough rinsing shall be carried out with clean water followed by final rinsing with dilute dichromate solution and oven drying. The phosphate coating shall be sealed with application of two coats of ready mixed, stoving type zinc chromate primer. The first coat may be “flash dried” while the second coat shall bestoved.

After application of the primer, two coats of finishing synthetic enamel paint shall be applied, each coat followed by stoving. The second finishing coat shall be applied after inspection of first coat of painting.

In case the Bidder proposes to follow his own standard surface finish and protection procedures or any other established painting procedures, like electrostatic painting etc., the procedure shall be submitted along with the Bids for Purchaser's review.

1.24 HANDLING, STORING AND INSTALLATION:

In accordance with the specific installation instructions as shown on manufacturer's drawings or as directed by the Purchaser or his representative, the Contractor shall unload, store, erect, install, wire, test and place into commercial use all the equipment included in the contract. Equipment shall be installed in an eat, workman like manners of that it is level, plumb, square and properly aligned and oriented.
Contractor may engage manufacturer's Engineers to supervise the unloading, transportation to site, storing, testing and commissioning of the various equipment being procured by them separately. Contractor shall unload, transport, store, erect, test and commission the equipment as per instructions of the manufacturer's supervisory Engineer(s) and shall extend full cooperation to them.
In case of any doubt/misunderstanding as to the correct interpretation of manufacturer's drawings or instructions, necessary clarifications shall be obtained from the Purchaser. Contractor shall be held responsible for any damage to the equipment consequent to not following manufacturer's drawings/instructions correctly.

Where assemblies are supplied in more than one section, Contractor shall make all necessary mechanical and electrical connections between sections including the connection between gantry to dead end.

Contractor shall be responsible for examining all the shipment and notify the Purchaser immediately of any damage, shortage, discrepancy etc. for the purpose of Purchaser's

information only. The Contractor shall submit to the Purchaser every week a report detailing all the receipts during the weeks However, the Contractor shall be solely responsible for any shortages or damages in transit, handling and/or in storage and erection of the equipment at Site. Any demurrage, wharfage and other such charges claimed by the transporters, railways etc. shall be to the account of the Contractor.

The Contractor shall be fully responsible for the equipment/material until the same is handed over to the Purchaser in an operating condition after commissioning. Contractor shall be responsible for the maintenance of the equipment/material while in storage as well as after erection until taken over by Purchaser, as well as protection of the same against theft, element of nature, corrosion, damages etc.
Where material/equipment is unloaded by Purchaser before the Contractor arrives at site or even when he is at site, Purchaser by right can hand over the same to Contractor and the reuponit will be the responsibility of Contractor to store the material in an orderly and proper manner.
The Contractor shall be responsible for making suitable indoor storage facilities, to store all equipment which requires indoor storage.
Exposed live parts shall be placed high enough above ground to meet the requirements of electrical and other statutory safety codes.

1.25 TOOLS AND TACKLES:

The Contractor shall supply with the equipment one complete set of all special tools and tackles for the erection, assembly, dis-assembly and maintenance of the equipment. However, these tools and tackles shall be separately, packed and brought onto Site.

1.26 SAFETY:

a) All safety regulations shall be complied by the contractor during survey, construction/ erection of the complete transmission line.

b) The erection shall be carried out in accordance with guidance given in the relevant parts of BS 5531 and current health and safety legislation.

c) Where foundations are installed on sloping or unstable ground the Contractor shall be responsible for ensuring the stability of the area and the safety of the public, all to the satisfaction of the EIC and local regulatory authorities.

d) The Contractor will provide or ensure that appropriate safety and/or health signs are in place at his work sites. Workers and their representatives must be informed of all the measures taken concerning health and safety at work and must be given suitable instruction about these signs.

e) The Contractor shall provide all appropriate protective clothing and equipment for the work to be done and ensure its proper use. Where required, safety nets, belts, harnesses and lines shall be provided by the contractor.

f) Provide and maintain in prominent and well-marked positions all necessary first- aid equipment, medical supplies and other related facilities. A sufficient number of trained personnel will be required to be available at all times to render first aid.

g) Report to the EIC promptly and in writing particulars of any accident or unusual or unforeseen occurrences on the site, whether these are likely to affect progress of the work or not.

h) Ensure that all equipment and tools, including PPE, used on the work-site are in good working condition, properly maintained.

i) Ensure that equipment is operated only by those workers who have been properly trained and are skilled in the operation of the equipment.

j) Have available for reference a manufacturer's operating manual for all the equipment and tools brought to the work-site.

k) The Contractor shall not dispose any waste, rubbish or offensive matter in any place not approved by the EIC or Statutory Authority having jurisdiction.

Remarks:

a. Components mentioned in mandatory spares list, which are not applicable as per system design consideration shall not be applicable

CHAPTER-2: SURVEY AND SOIL INVESTIGATION

2.1 Scope of the Work

The detailed scope shall include but not be limited to following: -

Reconnaissance and Route alignment survey, Detailed, pole Spotting, check survey, Soil Investigation, including Estimating of quantities (BoQ) for different items of work and Forest clearance / other clearances for the entire transmission line corridor.

2.2 Survey

The survey of transmission lines shall be carried out accurately and expeditiously.

2.2.1 The work of survey shall be done in following stages:

(S) Reconnaissance and route alignment survey
(ii) Detailed Survey
(S) Poles and structure Spotting
(S) Check Survey

2.2.1.1 Reconnaissance and route alignment survey:

The reconnaissance and route alignment survey is an essential preliminary activity to collect first-hand field data required for planning, design and execution of the 33 kV overhead power evacuation line on poles.

While fixing the preliminary route alignment during the reconnaissance survey, the following general considerations shall be strictly adhered to:

i. The route shall be as short, direct and straight as possible.
ii. The transmission line corridor shall be easily approachable for construction and maintenance activities.
iii. The number of angle poles shall be kept to the minimum, and wherever unavoidable, large angle locations shall be minimized.
iv. The cost and time involved in securing Right of Way (ROW), construction of access roads and other preparatory works shall be kept to the minimum.
v. Crossings with permanent structures such as railway lines, highways and major roads shall be minimized and, wherever unavoidable, shall preferably be done at right angles. Necessary reference to the applicable Railway regulations, Railway Electrification rules and guidelines of local civic authorities shall be made for providing protection at such crossings. Guarding may be avoided where fast-acting protective devices are provided as per approved standards.
vi. The vertical clearances above roads shall be fixed with reference to the center line of the road, strictly as per statutory safety regulations

The following areas should be avoided as far as possible while selecting route:

a. Areas involving risk to foundation stability, such as marshy land, low-lying areas, riverbeds, landslide zones, flood-prone areas, seasonal nalas, ponds, lakes and waterlogged regions.
b. Areas involving risk to human life or property, including residential zones, religious places, public buildings, defense installations, industries, aerodromes and aircraft approach paths, fertile agricultural lands with standing crops, uneven terrain, quarries, underground mines, gardens and plantations.
c. Inaccessible locations where construction of approach roads is not feasible.
d. Routes involving abrupt changes in ground levels, excessive long spans, multiple river crossings, power line crossings or alignment running close and parallel to telecommunication lines.
e. Reserved forest areas or locations involving high compensation for land acquisition, tree cutting or resettlement.
f. Locations near explosive storage units, bulk oil storage tanks, oil or gas pipelines and other hazardous installations.

g. Wildlife sanctuaries, coal fields, mining zones and environmentally sensitive areas, unless specifically permitted by the competent authority.

2.2.1.2 Detailed Survey:

After the reconnaissance survey and angle point marking, the route is approved by the competent authorities with or without changes. Detailed survey follows the route alignment.

Work of detailed survey is distinctly done in two stages:

i. Field Observation Record and Calculations:

Readings shall be taken with the help of electronic total station or any other precise instrument.

ii. Plotting of Profiles

From From the field book entries, the **route plan and longitudinal profile (survey charts)** shall be prepared in the drawing office. The drawings shall be prepared on standard graph sheets to the following scales:

Vertical Scale: 1:200
Horizontal Scale: 1:2000

These shall show:

a. The **Survey Charts Shall Clearly Indicate the Following:**
b. Longitudinal profile along the centre-line of the proposed 33 kV pole-mounted evacuation route. Cross-section profile wherever appreciable difference in level exists with respect to the centre-line. In such cases, cross-section levels shall be taken at 50 m to 100 m intervals. Route plan showing all permanent and temporary objects lying within the Right of Way (ROW). Angle of line deviation, clearly marked as Left (L) or Right (R). The charts shall clearly show:
Levels of roads, canals and railway crossings,
Maximum water / flood levels,
Rail / track top levels,
Heights of existing poles, structures and crossing lines,
c. Minimum ground clearance of the 33 kV conductor,
Clearance between the bottom conductor of the crossing line and the top conductor / earth wire of the crossed line,
Girth, category and type of trees falling within the ROW, and
Trees outside the ROW but likely to damage the 33 kV line during felling.

2.2.1.3 Pole Spotting:

a The profile a. The longitudinal profile and route plan shall be plotted to a scale of 1:2000 (horizontal) and 1:200 (vertical) for the purpose of 33 kV pole spotting. Where the ground level variation is excessive, the profile may be broken into multiple sheets with minimum 10 mm overlap.

b. While finalizing type and location of poles at road, railway, river and utility crossings, the Contractor shall strictly follow the prevailing rules and regulations of the respective authorities. The Contractor shall collect all necessary field data and submit required drawings for obtaining clearances from Road, Railway, Aviation, River, PTCC and Forest authorities, wherever applicable.

c. The Contractor shall be fully responsible for correct alignment of the 33 kV pole line. If any pole is found out of alignment after erection, the same shall be rectified by dismantling and re-erection at the Contractor's own cost, risk and responsibility.

d. After marking (peg marking) of all angle, terminal and special poles, approval shall be obtained from the Purchaser. Thereafter, peg marking of straight-line (intermediate) poles shall be carried out. Pegging of pole

foundations shall be done at all pole locations.

e. The pole spotting criteria shall be suitable for the wind zone, conductor configuration and soil conditions, and shall conform to the relevant Indian Standards and utility guidelines. Proven sag–tension data / sag templates suitable for 33 kV conductors shall be used for finalizing pole locations. Three (3) sets of sag–tension calculations shall be submitted to the Purchaser for approval.

2.2.1.4 Check Survey:

The check survey shall be conducted along the approved alignment in accordance with IS-5613 (Part-II/Section-2) (as amended up to-date).

i. Checking and Line Alignment:

The work carried out during detailed survey shall be reconfirmed by traversing. Closing error (if any) shall be judiciously distributed in all the previous temporary Sections and all angle points are finally marked on ground by means of concrete pillars. Once the angle points are marked, correct angle of deviation and Section length are measured and noted on Survey Charts.

ii. Spotting and Peg Marking of Pole Locations

To facilitate checking of the alignment suitable reference marks shall be provided with actual coordinates, paint marks, and landmarks for reference. Concrete pillars of suitable sizes shall be planted at all angle locations and suitable wooden/Iron pegs shall be driven firmly at the intermediate points.

The contractor, while carrying out the check survey, shall peg mark the tower position on ground conforming to the survey charts. In the process, it is necessary to have the pit centers marked according to the excavation marking charts to be prepared by the contractor and approved by the purchaser. The levels up or down of each pit centre with respect to the centre of the tower location shall be noted and recorded for determining the volume of earth work required to meet the design requirements. At the starting point of the route survey, an angle iron spike shall be driven firmly into the ground leaving the topa little above the ground level.

After completing the detailed survey and check, the contractor shall submit the final route alignment and tower schedule for approval of the purchaser.

2.3 Schedule of materials:

When the survey is approved, the contractor shall submit to the purchaser a complete detail schedule (BoQ) of all materials to be used in the line. Size and length of conductor etc. are also to be given in the list.

2.4 Right of way

(a) Any right of way, which may be required by the contractor for execution of transmission line, shall be submitted to the purchaser. The approval from Civil Authority, P&T Authority and other Agency / Government as required shall be arranged by the contractor on behalf of purchaser.

(b) For obtaining clearance for Road, Railway, Power line crossing and PTCC clearance, the contractor shall be responsible for preparation of requisite proposals following the standard norms of the appropriate authorities at appropriate time. The contractor shall be responsible for submission and follow up with the concerned department till approval for execution. The requisite charges to the concerned department will be paid by the contractor.

(c) Identification and demarcation of defense, airport areas, forest land etc. and plotting, preparation of proposals with necessary drawings/schedules is the responsibility of the contractor.

(d) Cost of Right of Way, compensation for land, structure, hutment, trees, crops etc. as required for arranging corridor and execution of the line shall be paid by the contractor.

(e) RoW of Approach/ Access roads to the work site shall be sole responsibility of contractor. All necessary compensation in this respect shall be borne by the contractor.

(f) Obtaining forest clearance shall be responsibility of the contractor. The contractor shall prepare and finalize the forest clearance proposal as per the latest guidelines of MoEF / Regulations of Forest Deptt./ FCA/ FRA. The necessary charges i.r.o forest land / forest clearance will be paid by the contractor to the concerned authorities.

2.5 Sub-Soil Investigation:

The contractor shall undertake the sub-soil investigation job enroute the proposed line route for a minimum of 25% of the total pole locations in consultation with the EIC and at railway crossings, major road crossings, power line crossings and wherever soil strata differs, to obtain required soil data for design of suitable foundation.

Scope of Work:

The scope of subsoil investigation covers execution of complete soil exploration and soil resistivity test for the transmission line including boring, drilling, collection of undisturbed soil sample where possible, otherwise disturbed samples, conducting laboratory test of soil samples to find out the various parameters as detailed in this Specification and submission of detailed reports in6 copies along with recommendation regarding suitable type of foundation for each bore hole along with recommendation for soil improvement where necessary.

Qualifying requirements of soil consultants:

All testing shall be done in a NABL accredited / Govt. Laboratory. This includes reputed government / autonomous laboratories / organizations, and other reputed testing laboratories.

Geo-Technical Investigations and Testing of the proposed site shall be done by the Contractor at his own cost.

Test Boring:

The boring shall be done at the locations as will be found necessary in consideration of superficial field observation, at special tower and anchor tower location of crossings and at about 20% (twenty percent) of the balance tower locations to represent more or less the total stretch of the line. However, such location for subsoil investigation shall be selected and finalized in consultation with the EIC.

The test boring through different layers of all kinds of soil shall have to be carried out by the contractor through the approved soil consultant as briefed hereunder.

a) Method of boring, selection of sampling tubes, sampling, recording of boring, protection, handling labeling of samples shall be done as specified in IS:1892 with latest revision, if any, after obtaining approval from the EIC. The contractor/ consultant shall furnish in the soil report in details the equipment and method of boring actually adopted.

b) Depth of boring below ground level shall be 10M only unless continuous bedrock is encountered earlier. In case rock is encountered at any depth within 10M, adequate study of rock and assessment of strength characteristics shall be done and recommendation shall be given.

S) Depending on the detailed survey report, the successful bidder has also to undertake soil investigation upto 40 m depth at special tower locations like River crossing or at location as may be required as per site conditions inconsultations with the purchaser.

c) Undisturbed soil samples shall be obtained for the initial 4M depth at every 1.5M interval and/or at change of strata. After this initial 4M depth, samples shall be obtained preferably at every 3M or where there is a change of strata.

d) In case collection of undisturbed samples becomes difficult/ impossible detailed soil testing on re-moulded soil sample is to be considered and reported in the soil report.

e) Standard penetration test as per IS: 2131 shall have to be conducted in different strata and recorded properly.

f) The ground water level shall be recorded during boring operation and incorporated in the bore log. The position of the water level just after monsoon period be ascertained from local people and indicated in the report.

2.6 SOIL RESISTIVITY TEST:

Soil resistivity test shall be conducted along the direction of line throughout length once in every 3 kilometers. By four-electrode method keeping the electrode spacing 50 meter and submit a comprehensive report to the purchaser. The testing shall be done as per IS: 3043.

Laboratory tests of soil samples:

The method and procedure of testing of soil sample to be followed shall be as per IS codes. Adequate volume of test samples shall be collected from site. Samples shall be properly sealed immediately after recovery as specified in relevant IS code and transported carefully to laboratory for carrying out necessary laboratory tests to find out the following parameters of every sample. Data and time of taking of the sample be recorded in the test report.

a) Natural Moisture Content, Liquid Limit, Plastic Limit and Plasticity Index, shrinkage limit etc.
b) Bulk, Dry and Buoyant Density, relative density etc.
c) Void Ratio (e-log P curve shall be submitted).
d) Specific Gravity.
e) Grain size Distribution (Sieve Analysis and Hydrometer Analysis)
f) Triaxial and consolidation Test (consolidated undrained and consolidated drained as and when applicable). The result shall be represented in Tables, Graphs and Drawings.
g) Laboratory Permeability Test.
h) Chemical tests. For both water and soil samples at different layers.
i) Evaluation of Bearing Capacity at different strata for square footings shall be done for 25mm settlement.
    i) At depths from 3m to 10m for different strata.
    ii) Factor of safety shall be considered as 2.5 for evaluation of safe bearing capacity of soil.
j) Unconfined compression test for cohesive soil (**Φ** = 0 Degree) if encountered.
k) Evaluation of swelling pressure, if any.

Submission of complete soil Investigation Report:

The contractor/soil consultant shall submit a comprehensive report along with graphs, curves and drawings etc. prepared by the consultant on the basis of the field data and laboratory test results. The soil consultant shall also give specific recommendation of deep foundation (Bored pile of uniform diameters) where considered to be necessary with size, shape and length of pile etc. for such locations.

The report shall contain specific recommendation regarding type of foundation to be adopted for each borehole including type of soil improvement for very weak soil.

The report shall contain the following:

a) Reference to Order No. and name of the Scheme.
b) Record of boring as per Appendix-D (Clause 6.5.1) of IS 1892.
c) Lay out plan showing the locations of bore holes with reference to fixed objects along the alignment vis-a-vis, the tower location numbers.
d) Date and time of taking soil sample for the individual bore holes.
e) Date of laboratory tests for all the soil samples.
f) Special recommendation and observation, if any.

The purchaser reserves the right to carry out separate soil investigation at his cost by engaging a separate agency for cross-checking the result obtained by the contractor.

In case the results are at variance the soil parameters to be adopted for final design will be at the sole discretion of the purchaser and such decision will be binding upon the contractor.

CHAPTER-3: Poles

3.1 TYPE OF POLES

1. 33 kV Feeder Bay at Interconnecting Substation
Design, engineering, supply, packing, transportation, erection, inspection, testing and commissioning of 33 kV feeder bay complete with gantry structure, circuit breaker, isolators, CTs, PTs, lightning arresters, control & relay panel, earthing system, danger plates, equipment marking, nuts, bolts & washers and all associated accessories, complete in all respects as per approved drawings and DISCOM / STU specifications.

2. 33 kV Overhead Single Circuit Line on Poles
Design, supply, packing, transportation, erection, stringing, sagging, inspection, testing and commissioning of 33 kV single-circuit overhead power evacuation line on PSC / Steel tubular / RSJ poles using 100 sqmm AAAC / ACSR conductor, including polymer insulators, cross-arms, clamps, complete hardware fittings, galvanized nuts, bolts & washers, earthing set for each pole, danger plates, phase plates, number plates, barbed-wire type anti-climbing device, pole marking/identification and all accessories, complete in all respects.

3. 33 kV Underground Cable for Railway / Road Crossing
Supply, packing, transportation, laying, inspection, testing and commissioning of 33 kV, 3 × 300 sqmm XLPE aluminium underground cable with jointing kits, termination kits, sand bedding, protective covers, trenching, backfilling, road/railway reinstatement, route marking, danger boards and all associated materials, complete in all respects.

4. 33 kV Double Pole (DP) Cut-Point Structure
Design, supply, packing, transportation, erection, inspection, testing and commissioning of 33 kV Double Pole (DP) Cut-Point Structure using 11 m PSC / Steel / RSJ poles with cross-arms, polymer insulators, complete hardware fittings, galvanized nuts, bolts & washers, stay set, earthing, danger plates, pole number & phase plates, barbed-wire anti-climbing device, equipment marking and foundation, complete in all respects.

5. 33 kV Single Pole Cut-Point / Isolation Structure
Design, supply, packing, transportation, erection, inspection, testing and commissioning of 33 kV Single Pole Cut-Point / Isolation Structure using 11 m / 13 m PSC / Steel pole with GO switch mounting arrangement, polymer insulators, complete hardware fittings, galvanized nuts, bolts & washers, stay set, earthing, danger plates, pole number & phase plates, barbed-wire anti-climbing device, equipment marking and foundation, complete in all respects

a. INSPECTION:

i. The Contractor shall keep the Purchaser informed well in advance of the commencement and progress of manufacture and fabrication of poles, cross-arms, brackets, hardware fittings and associated accessories, at various stages, so that necessary inspection arrangements can be made. Acceptance of any batch of materials shall not absolve the Contractor of his responsibility to meet all requirements of the specifications and shall not prevent subsequent rejection if any item of that batch is later found defective.

ii. The Purchaser or his authorized representative shall have free access at all reasonable times to those parts of the manufacturer's works where the poles, pole accessories and line hardware for this 33 kV line are being fabricated and shall be extended all reasonable facilities to verify that the fabrication is being carried out strictly as per the approved specifications.

iii. iii. Unless specified otherwise, inspection shall be carried out at the place of manufacture prior to dispatch, and shall be conducted in such a manner so as not to unnecessarily interfere with manufacturing operations.

iv. iv. If any pole, structural member, cross-arm or hardware item is found not to comply with the approved design or specification, the same shall be liable for rejection. No rejected material shall be resubmitted for inspection unless the defect is considered rectifiable by the Purchaser or his authorized representative.

v. v. Any defects noticed during fabrication shall be rectified only with the consent of the Purchaser and as per the procedure laid down by him.

vi. vi. The manufacturer shall supply all gauges, templates and measuring instruments necessary to satisfy the Purchaser regarding conformity of fabrication to the approved drawings.

vii. vii. The correct grade and quality of steel shall be used for fabrication of steel poles, cross-arms and hardware items. To verify the quality of steel used, the Inspector may, at his discretion, get the material tested at an approved laboratory, and the cost of such testing shall be borne by the Contractor

b. PACKING:

Poles (PSC / Steel / RSJ) shall be properly stacked, supported and tied with suitable binding material to avoid bending, distortion or surface damage during handling and transportation.

Cross-arms, brackets, pole-top fittings, clamps, hangers, stay rod accessories and all similar loose steel items shall be properly nested, bundled and securely tied in convenient lots to prevent loss or damage during transit.

Bolts, nuts, washers and other small hardware items shall be packed in double gunny bags / strong HDPE bags, properly sealed and accurately tagged with item description, size and quantity.

The packing shall be sufficiently strong to avoid any loss, damage, corrosion or deterioration during loading, unloading, transportation and storage at site. Each bundle or package shall be clearly marked with identification details.

CHAPTER- 4: TECHNICAL SPECIFICATION FOR AAAC CONDUCTOR

4.1 SCOPE:

This specification shall include the design, engineering, manufacture, factory tests, supply, transportation, survey, installation, end to end field tests etc. complete for AAAC conductor to be used in 333 KV Transmission lines under this contract.

4.2 STANDARD:

All major component should confirm latest and relevant standard. All cables, conductors surge protection devices, earthing etc.. must comply with statutory standards applicable in India.

4.3 DESIGN CRITERIA & CONSTRUCTION:

4.3.1 MATERIALS: (Materials for AAAC Conductor)

AAAC (All Aluminium Alloy Conductor) is a stranded conductor made from high-strength, high-conductivity aluminium-magnesium-silicon alloy (typically Al-Mg-Si, Alloy 6201-T81).

It is used for overhead power distribution and transmission lines where better corrosion resistance, lower weight, and higher conductivity are required compared to ACSR.

Key features: High strength-to-weight ratio

Better corrosion resistance (ideal for coastal & industrial areas) Higher conductivity vs ACSR

Lower electrical losses Suitable for longer spans compared to AAC

Typical Technical Specification (General)

Material

Conductor made from Aluminium Alloy 6201-T81

Conforming to IS: 398 (Part 4) / IEC 61089

Minimum conductivity: ≥ 52% IACS

Construction

Conductor shall consist of several strands of hard-drawn aluminium alloy wire helically stranded in concentric layers.

Surface: Smooth, bright, free from scratches, inclusions or any foreign matter

4.4 TESTS:

Type, acceptance and routine tests shall be carried out on the conductor as per Purchaser's approved quality plan/ approved manufacturing quality plan.

4.9.1 TYPE TESTS:

a. The AAAC conductor to be supplied shall be of type tested design. During detail engineering, the contractor shall submit for Owner's approval the reports the type tests as per relevant applicable standard (IS / IEC / equivalent) and carried out not earlier than ten years prior to the date of NIT. These reports should be for the test conducted on the conductor similar to those proposed to be supplied under this contract and the test(s) should have been either conducted at an independent laboratory (NABL Accredited) or should have been witnessed by a client.

b. However, if contractor is not able to submit report of the type test(s) conducted within last ten years from the date of NIT, or in the case of type test report(s) are not found to be meeting the specification requirements, the contractor shall conduct all such tests under this contract at no additional cost to the owner either at third party lab (NABL Accredited) or in presence of client/ owners representative and submit the reports for approval.

4.9.2 ACCEPTANCE TESTS:

Acceptance tests shall be conducted on every lot offered for inspection.

FOR AAAC CONDUCTOR AS APPLICABLE**:**

a) Visual checks for joints etc.

Two/three drums from each lot shall be rewound in presence of the purchaser's representative to facilitate visual checks for joints, scratches etc. and to see that the conductor generally conforms to the requirement of the specification.

In the process declared length and weight shall also be verified.

b) Dimensional check on aluminium and steel strands.
c) Check for lay ratio of various layers of Aluminium and Steel.
d) Breaking load test on individual aluminium & steel wires.
e) Elongation test on steel wire.
f) Ductility test
g) Wrap test on steel and aluminium wire.
h) D.C. resistance test on Aluminium strands.
i) Galvanizing test on steel strands.
j) Visual check on drums.

Any other tests not mentioned above but are required to be carried out as per relevant IS / IEC shall also be conducted by bidder.

4.9.3 ROUTINE TEST:

To ensure quality of conductor to be supplied under this contract, the suppliers have to carry out routine tests as described in IS:398 (Part-II-1982) and maintain a record for periodic inspection of the same by the representative of purchaser. All internal records as per purchaser's approved MQAP has to be maintained properly and to be shown to inspecting Engineers of purchaser during inspection.

Moreover, in course of production, the contractor shall ensure the following:

a) Check that the joints are as per specifications.
b) Check that there are no cuts, fins etc. on the strands.
c) Check the correctness of stranding.
d) Check that the drums are as per specification.

For quality assurance of the materials used in the production he will also check the following:

i) Chemical analysis of aluminium used for making aluminium strands.
ii) Chemical analysis of steel used for making steel strands.
iii) Chemical analysis of zinc used for Galvanizing.

Any other tests not mentioned above but are required to be carried out as per relevant IS / IEC shall also be conducted by bidder.

4.9.4 SELECTION OF SAMPLES – AS PER RELATED IS.

4.5 ADDITIONAL TESTS:

Purchaser may at his option, ask the suppliers to carry out additional tests at the Purchaser's cost in the supplier's premises or at site or in any place to satisfy himself that the materials comply with the specification.

4.6 REJECTION & RETEST:

Rejection and retesting of equipment / materials shall be guided by relevant clause of IS/IEC/International Standard.

4.7 TEST REPORTS:

4.12.1 Test at Manufacturer works and Test Certificate:

Acceptance test reports shall be furnished in six (6) copies. After approval of the same by the purchaser, materials will be dispatched. An advance notice of minimum 7 days shall be given before the date when the test will be carried out.

4.12.2 Record of routine test reports shall be maintained by the contractor at his works for periodic inspection of the same by the purchaser's representative.

4.8 INSPECTION:

4.13.1 The representative of purchaser shall have full facilities for unrestricted inspection of manufacturer's works, the raw materials, and manufacture of the conductor and for conducting necessary tests as detailed herein before. The supplier shall keep the purchaser informed well in advance of the time of starting and of progress of manufacture of conductor in its various stages so that arrangement could be made for inspection.

4.13.2 No conductor shall be dispatched before it has been satisfactorily inspected, tested and clearance issued by Purchaser for dispatch unless the inspection is waived by Purchaser in writing.

4.13.3 The acceptance of any quantity of material shall in no way relieve the contractor of any of his responsibility for meeting all requirements of the specification, and shall not prevent subsequent rejection, if such materials are later found to be defective.

4.9 PACKING AND FORWARDING:

4.14.1 GENERAL:

i) The conductor shall be wound on steel drum strong enough and provided with tagging of adequate strength, constructed to protect the conductor against all damage and displacement during transit, storage and subsequent handling and stringing operations in the field. The drums shall generally conform to IS: 778 – 1980 as amended up to date and the dimensions shall be as per requirement of conductor length.

ii) Only one conductor length shall be packed on such drum.

iii) The drum shall be suitable for wheel mounting.

4.14.2 CONSTRUCTION OF DRUMS:

Conductors shall be transported in the steel drum. Preservative treatment shall be applied to the entire drum with preservatives of such a quality which is not harmful to the conductor. Drum same shall be painted with rustproof paint so that conductor is not affected. Contractor shall take back drums except for the Mandatory spares.

4.14.3 PROTECTIVE ARRANGEMENT:

i) The inner side of the flanges and drum barrel surfaces shall be painted with bitumen-based paint/aluminum paint.

ii) Before reeling, cardboard or double corrugated or thick bituminized waterproof paper shall be secured to the drum barrel and inside of flanges of the drums by means of suitable adhesive material. These protective wrappings and the adhesive material used shall be of a quality which is not harmful to the conductor. The bituminous waterproof paper shall also be provided between each layer of conductor.

iii) After reeling the conductor, the exposed surface of the outer layer of the conductor shall be wrapped with waterproof, thick, bituminized paper and also with thick plastic sheet to prevent the conductor from dirt, grit and damage during transport and handling.

iv) After application of bituminized and plastic paper, protective tagging of circumferential batten of suitable thickness shall be provided, in order to protect conductor from damage during transit in the event of breakage/detachment of the external protective tagging.

v) The thickness of the external protective tagging or circumferential batten shall be sufficient to withstand transit hazards.

vi) Outside the protective tagging, there shall be minimum of two binders consisting of hoop iron or galvanized steel wire. Each protective tagging shall have two recesses to accommodate hoop binders.

vii) The conductor ends shall be properly sealed and secured with the help of 'U' clamps on the side of one of the flanges to avoid loosening of the conductor layers during transit and handling.

4.14.4 MARKING:

Each drum shall have following information stenciled on it in indelible ink along with other essential details.

(a) Contract/Purchase order number :

(b) Name and address of the consignee :

(c) Manufacturer's name or trademark :

(d) Drum number :

(e) Code name and size of the conductor Length of the conductor in meters :

(f) Gross weight of the drum with protective tagging Including conductor :

(g) Net weight of the conductor :

(h) Arrow marking for unwinding :

(i) Position of the conductor end :

(j) Lot number :

(k) Name of the destination :

(l) Date of Manufacture :

Before dispatch, property identification mark "-----" shall be engraved in each drum.

CHAPTER – 5: COMPOSITE SILICONE RUBBER INSULATORS / POLYMER LONG ROD INSULATORS (70kN and 120kN)

5. Scope

5.1.1 This specification shall also include the design, engineering, manufacture, factory tests, supply, transportation, insurance, storage, survey, installation, end to end field tests etc. complete for insulators to be used in 33 KV Transmission lines under this contract. The scope shall be read in conjunction with the GTS (Chapter 1).

5.1.2 The Details of the Materials required for the above-mentioned Line under this Specification are given in this Specification and the quantity shall be finalized based on the survey to be done by the Contractor.

5.1.3 STANDARDS

The Insulator Strings and its Components shall conform to the following Indian / International Standards, which shall mean Latest revision, with amendments/ changes adopted and published, unless specifically stated otherwise in the Specification.

5.1.4 In the event of supply of Insulators conforming to Standards other than specified, the Bidder shall confirm in his Bid that these Standards are equivalent or better to those specified. In case of Award, salient features of comparison between the Standards proposed by the Bidder and those specified in this document will be provided by the Supplier to establish equivalence.

Sr. NO.	INDIAN STANDARD	TITLE	INTERNATIONAL STANDARD
1.	IS: 209-1992	Specification for Zinc	BS: 3436
2.	IS: 406-1991	Method of Chemical Analysis of Slab Zinc	BS: 3436
3.	IS: 731-1991	Porcelain Insulators for overhead Power Lines with a nominal Voltage greater than 1000 V	BS: 137- (I & II) IEC: 60383
4.	IS: 2071 Part (I) – 1993 (Part (II) – 1991 Part (III) – 1991	Methods of High Voltage Testing	IEC: 60060-1
5.	IS: 2486 Part- I-1993 Part- II-1989 Part-III-1991	Specification for Insulator Fittings for Overhead Power Lines with a Nominal Voltage greater than 1000V. General Requirements and Tests Dimensional Requirements Locking Devices	BS: 3288 IEC: 60120 IEC: 60372
6.	IS: 2629-1990	Recommended Practice for Hot, Dip Galvanization for Iron and Steel	ISO – 1461 I
7.	IS: 2633-1992	Testing of Uniformity of Coating of Zinc coated articles	
8.	IS: 3188-1988	Dimensions for Disc Insulators	IEC: 60305
Sr. NO.	**INDIAN STANDARD**	**TITLE**	**INTERNATIONAL STANDARD**

9.	IS: 6745-1990	Determination of Weight of Zinc Coating on Zinc Coated Iron and Steel articles	BS: 433 – 1969 ISO: 1460 -1973
10.	IS: 8263-1990	Methods of RI Test of HV Insulators	IEC: 60437 NEMA Publication No. 07/ 1964 / CISPR
11.	IS: 8269-1990	Methods for Switching Impulse Test on HV Insulators	IEC: 60506
12.		Thermal Mechanical Performance Test and Mechanical performance Test on String Insulator units	IEC: 60575
13.		Salt Fog Pollution Voltage Withstand Test	IEC: 60507
14.		Composite Insulators for A.C. Overhead Lines with nominal Voltage greater than 1000V – Definitions, Test methods and Acceptance Criteria	IEC: 61109
15.		Guide for the selection of Insulators in respect of Polluted Conditions	IEC: 60815
16.		Tests on Insulators of Ceramic Material or glass or glass for overhead Lines with a nominal Voltage greater than 1000V	IEC: 60383
17.		Characteristics of String Insulator units of the Long Rod Type	IEC: 60433

The Standards mentioned above are available from:

Reference Abbreviati	Name and Address
BS	British Standards, British Standards Institution 101, Pentonvile Road, N – 19-ND, UK
IEC / CISPR	International Electro Technical Commission, Bureau Central de la Commission, electro Technique international, 1 Rue de verembe, Geneva, SWITZERLAND
BIS / IS	Beureau of Indian Standards. Manak Bhavan, 9, Bahadur Shah Zafar Marg,
	New Delhi – 110001. INDIA
ISO	International Organisation for Standardization. Danish Board of Standardization Danish Standardizing Sraat, Aurehoegvej-12 DK-2900, Heeleprup, DENMARK
NEMA	National Electric Manufacture Association, 155, East 44th Street. New York, NY 10017 U.S.A.
ASTM	American Society for Testing and Materials, 1916 Race St. Philadelphia, PA19103 USA

Chapter 6 – Deleted

CHAPTER-7: HARDWARE FITTINGS

7.0 Technical Description of Hardware Fittings

7.1 DETAILS OF HARDWARE FITTINGS

7.1.1 The hardware fittings shall be suitable for use with composite long rod insulators and polymer long rod insulators having ball and socket fittings. Each hardware fitting shall be supplied complete in all respects and shall include the following hardware parts:

7.1.2 Suitable arcing horn as specified.

7.1.3 Suitable yoke plates complying with the specifications given hereinafter.

7.1.4 Corona control rings/ grading ring with fittings for attachment to line side yoke plate.

7.1.5 Sag adjustment plate for double tension hardware fittings and turn buckle for single tension hardware fittings.

7.1.6 Suspension and dead end assembly to suit conductor size as detailed in this specification.

7.1.7 Provisions for attaching balancing weights on the line side yoke plate of single suspension pilot hardware fittings.

7.1.8 Other necessary fittings viz D-shackles, eye links, extension links, ball clevis, socket clevis, clevis eye, U clevis and chain link etc. to make the hardware fittings complete.

7.1.9 2.5% extra fasteners.

7.2 DIMENSIONS OF INSULATOR STRING ALONG WITH HARDWARE FITTING

Hardware fittings for 132kV / 220 kV Transmission line with suitable AAAC conductor to be supplied by the contractor shall consist of suspension & tension clamps.

7.3 INTERCHANGEABILITY

The hardware for insulator strings with composite long rod insulators and polymer long rod insulators together with ball and socket fittings shall be of standard design, so that these hardware are inter-changeable with each other and suitable for use with insulators of any make conforming to relevant Indian/International Standard.

7.4 CORONA AND RI PERFORMANCE

Sharp edges and scratches on all the hardware fittings shall be avoided. All surfaces must be clean, smooth, without cuts and abrasions or projections. The Contractor must give suitable assurance about the satisfactory corona and radio interference performance of the materials offered by him.

7.5 MAINTENANCE

7.5.1 The hardware fittings offered shall be suitable for employment of hot line maintenance technique so that usual hot line operations can be carried out with ease, speed and safety. The technique adopted for hot line maintenance shall be generally bare hand method & hot stick method. The Bidder should clearly establish in the bid, the suitability of his fittings for hot line maintenance.

7.5.2 The line side yoke plate shall have a notch & a working hole of suitable size. The design of corona control rings/grading ring shall be such that it can be easily replaced by employing hot line maintenance technique.

7.6 DESIGNATION

7.6.1 Ball and Socket Designation

The designation should be in accordance with the standard dimensions stated in IS:2486-(Part-II)/IEC:60120 (or latest revision thereof). The dimensions shall be checked by the appropriate gauge after 179ulfil179dal179 only.

7.7 SECURITY CLIPS AND SPLIT PINS

7.7.1 Security clips for use with ball and socket coupling shall be R-shaped, hump type which provides positive locking of the coupling as per IS:2486-(Part-III)/ IEC : 60372 (or latest revision thereof). The legs of the security clips shall be spread after assembly in the works to prevent complete withdrawal from the socket. The locking device should be resilient, corrosion resistant and of suitable mechanical strength. There shall be no risk of the locking device being displaced accidentally or being rotated when in position. Under no circumstances shall the locking devices allow, separation of fittings.

7.7.2 The hole for the security clip shall be countersunk and the clip should be of such design that the eye of clip may be engaged by a hot line clip puller to provide for disengagement under 179ulfil179da conditions.

7.7.3 Split pins shall be used with bolts & nuts.

7.8 ARCING HORN/INTERMEDIATE ARCING HORN

7.8.1 The arcing horn / Intermediate Arcing Horn shall be either ball ended rod type or tubular type.

7.8.2 The arcing horn shall be provided as shown on the drawing of the hardware fittings, in this specification.

7.8.3 The air gap shall be so adjusted to ensure effective operation under actual field conditions.

7.9 YOKE PLATES

The strength of yoke plates shall be adequate to withstand the minimum ultimate tensile strength in line with the design proposed for the transmission line.

The plates shall be either triangular or rectangular in shape as may be necessary. The design of yoke plate shall take into account the most unfavorable loading conditions likely to be experienced as a result of dimensional tolerances for disc.

insulators as well as components of hardware fittings within the specified range. The plates shall have suitable holes for fixing corona control rings/grading ring/arcing horn. Design calculations i.e. for bearing & tensile strength, for deciding the dimensions of yoke plate shall be furnished by the contractor. The holes provided for bolts in the yoke plate should satisfy shear edge condition as per Clause No. 10.2.4.2 of IS:800-2007 (or latest revision thereof).

7.10 WORKMANSHIP

7.10.1 All the equipment shall be of the latest design and conform to the best modern practices adopted in the Extra High Voltage field. The Contractor shall offer only such equipment as guaranteed by him to be satisfactory and suitable for the rated transmission lines and will give continued good performance.

7.10.2 The design, manufacturing process and quality control of all the materials shall be such as to give the specified mechanical rating, highest mobility, elimination of sharp edges and corners to limit corona and radio-interference, best resistance to corrosion and a good finish.

7.10.3 All ferrous parts including fasteners shall be hot dip 187ulfil187dal, after all machining has been completed. Nuts may, however, be tapped (threaded) after 187ulfil187dal187 and the threads oiled. Spring washers shall be electro 187ulfil187dal. The bolt threads shall be undercut to take care of the increase in diameter due to 187ulfil187dal187. Galvanising shall he done in accordance with IS:2629-1985 / IS-1367 (Part 13) (latest revision thereof) and shall satisfy the tests mentioned in IS:2633-1986 (latest revision thereof).

7.10.4 Before ball fittings are 187ulfil187dal. All die flashing on the shank and on the bearing surface of the ball shall be carefully removed without reducing the dimensions below the design requirements.

7.10.5 The zinc coating shall be perfectly adherent, of uniform thickness, smooth, reasonably bright, continuous and free from imperfections such as flux, ash rust, stains, bulky white deposits and blisters. The zinc used for 187ulfil187dal187 shall be Zinc of any grade in IS: 209:1992 ingot (latest revision thereof) or IS:13229:1991 (latest revision thereof).

7.10.6 Pin balls shall be checked with the applicable “GO” gauges in at least two directions. One of which shall be across the line of die flashing, and the other 90o to this line. “NO GO” gauges shall not pass in any direction.

7.10.7 Socket ends, before 187ulfil187dal187, shall be of uniform contour. The bearing surface of socket ends shall be uniform about the entire circumference without depressions of high spots. The internal contours of socket ends shall be concentric with the axis of the fittings as per IS:2486/IEC : 120 (latest revision thereof).
The axis of the bearing surfaces of socket ends shall be coaxial with the axis of the fittings. There shall be no noticeable tilting of the bearing surfaces with the axis of the fittings.

7.10.8 In case of casting, the same shall be free from all internal defects like shrinkage, inclusion, blow holes, cracks etc. Pressure die casting shall not be used for casting of components with thickness more than 5 mm.

7.10.9 All current carrying parts shall be so designed and manufactured that contact resistance is reduced to minimum.

7.10.10 No equipment shall have sharp ends or edges, abrasions or projections and cause any damage to the conductor in any way during erection or during continuous operation which would produce high electrical and mechanical stresses in normal working. The design of adjacent metal parts and mating surfaces shall be such as to prevent corrosion of the contact surface and to maintain good electrical contact under service conditions.

7.10.11 All the holes shall be cylindrical, clean cut and perpendicular to the plane of the material. The periphery of the holes shall be free from burrs.

7.10.12 All fasteners shall have suitable corona free locking arrangement to guard against vibration loosening.

7.10.13 Welding of aluminium shall be by inert gas shielded tungsten arc or inert gas shielded metal arc process. Welds shall be clean, sound, smooth, uniform without overlaps, properly fused and completely sealed. There shall be no cracks, voids incomplete penetration, incomplete fusion, under-cutting or inclusions. Porosity shall be 188ulfil188da so that mechanical properties of the aluminium alloys are not affected. All welds shall be properly finished as per good engineering practices.

7.11 DRAWINGS & DOCUMENTS

7.11.1 The Contractor shall furnish full description and illustrations of all materials offered during detailed engineering.

7.11.2 Fully dimensioned drawings of the complete 33 kV insulator string hardware and component parts shall be submitted, indicating clearly:

7.11.3 (i) Attachment of hanger or strain plate
(ii) Suspension and dead-end assemblies
(iii) Arcing horn attachment (where specified)
(iv) Simple yoke plates (where required)

(v) Ball and socket type hardware fittings

(vi) Links, D-shackles, U-clevis and extension fittings

7.11.4 All drawings shall be identified by a drawing number and contract number. All drawings shall be neatly arranged. All drafting & lettering shall be legible. The minimum size of lettering shall be 3 mm. All dimensions & dimensional tolerances shall be mentioned in mm.

The drawings shall include :

(i) Dimensions and dimensional tolerance.

(ii) Material, fabrication details including any weld details & any specified finishes & coatings. Regarding material designation & reference of standards are to be indicated.

(iii) Catalogue No.

(iv) Marking

(v) Weight of assembly

(vi) Installation instructions

(vii) Design installation torque for the bolt or cap screw.

(viii) Withstand torque that may be applied to the bolt or cap screw without failure of component parts.

(ix) The compression die number with recommended compression pressure.

(x) All other relevant terminal details.

7.11.5 After placement of award, the Contractor shall submit fully dimensioned drawings & type test reports, including all the components to the purchaser for acceptance. After getting acceptance from the purchaser the Contractor shall submit copies (both hard & soft) of the same drawings to the purchaser.

7.12 ACCESSORIES FOR CONDUCTOR

7.20.1 General

This portion details the technical particulars of the accessories for Conductor. 2.5% extra fasteners and retaining rods shall be provided.

7.20.2 Mid Span Compression Joint

Mid Span Compression Joint shall be used for joining two lengths of conductor. The joint shall have a resistively less than 75% of the resistivity of equivalent length of conductor. The joint shall not permit slipping off, damage to or failure of the complete conductor or any part there of at a load less than 95% of the ultimate tensile strength of the conductor.

The joint shall be made of steel and aluminium sleeves for jointing the steel core and aluminium wires respectively. The steel sleeve should not crack or fail during compression. The steel sleeve shall be hot dip 189ulfil189dal. The aluminium sleeve shall have aluminium of purity not less than 99.5%.

7.20.3 T-Connector

T-Connector of compression type shall be used for jumper connection at transposition tower . It shall be manufactured out of 99.5% pure aluminium and shall be strong enough to withstand normal working loads. The T-connector shall have a resistivity across jumper less than 75% resistivity of equivalent length of conductor. The T-connector shall not permit slipping off, damage to or failure of complete conductor.

7.20.4 Repair Sleeve

Repair Sleeve of compression type shall be used to repair conductor with not more than two strands broken in the outer layer. The sleeve shall be manufactured from99.5% pure aluminium and shall have a smooth surface. The repair sleeve shall comprise of two pieces with a provision of seat for sliding of the keeper piece. The edges of the seat as well as the keeper piece shall be so rounded that the conductor strands are not damaged during installation.

7.13 VIBRATION DAMPER

7.13.1 Vibration dampers of 4R-stockbridge type with four (4) different resonances spread within the specified aeolian frequency band width corresponding to wind speed of 1 m/s to 7 m/s shall be used at suspension and tension points on each conductor in each span along with bundle spacers to damp out aeolian vibration as mentioned hereinafter.

7.13.2 Alternate damping systems or “Dogbone” dampers offering equivalent or better performance also shall be accepted provided the manufacturer meets the qualifying requirements stipulated in the Specifications. Relevant technical documents to establish the technical suitability of alternate systems shall be furnished by the contractor.

MATERIAL AND WORKMANSHIP

7.13.3 All the equipment shall be of the latest proven design and conform to the best modern practice adopted in the extra high voltage field. The contractor shall offer only such equipment as guaranteed by him to be satisfactory and suitable for 132kV/220 kV transmission line application with conductors and will give continued good performance.

7.13.4 The design, manufacturing process and quality control of all the materials shall be such as to achieve requisite factor of safety for maximum working load, highest mobility, elimination of sharp edges and corners, best resistance to corrosion and a good finish.

7.13.5 All ferrous parts shall be hot dip 192ulfil192dal, after all machining has been completed. Nuts may, however, be tapped (threaded) after 192ulfil192dal192 and the threads oiled. Spring washers shall be electro 192ulfil192dal as per grade 4 of IS-1573-1970 (or latest revision thereof). The bolt threads shall be undercut to take care of increase in diameter due to 192ulfil192dal192. Galvanising shall be done in accordance with IS:2629/IS-1367 (Part-13) (latest revision thereof) and satisfy the tests mentioned in IS-2633. Fasteners shall withstand four dips while spring washers shall withstand three dips. Other 192ulfil192dal materials shall have a minimum overall coating of Zinc equivalent to 600 gm/sq.m and shall be guaranteed to withstand at least six dips each lasting one minute under the standard Preece test for 192ulfil192dal192 unless otherwise specified.

7.13.6 The zinc coating shall be perfectly adherent, of uniform thickness, smooth, reasonably bright, continuous and free from imperfections such as flux, ash, rust stains, bulky white deposits and blisters. The zinc used for 192ulfil192dal192 shall be of grade Zn.99.95 as per IS:209 (latest revision thereof).

7.13.7 In case of castings, the same shall be free from all internal defects like shrinkage, inclusion, blow holes. Cracks etc.

7.13.8 All current carrying parts shall be so designed and manufactured that contact resistance is reduced to minimum and 192ulfil192da heating phenomenon is averted.

7.13.9 No equipment shall have sharp ends or edges, abrasions or projections and shall not cause any damage to the conductor in any way during erection or during continuous operation which would produce high electrical and mechanical stresses in normal working. The design of adjacent metal parts and mating surfaces shall be such as to prevent corrosion of the contact surface and to maintain good electrical contact under all service conditions.

7.13.10 Particular care shall be taken during manufacture and subsequent handling to ensure smooth surface free from abrasion or cuts.

7.13.11 The fasteners shall conform to the requirements of IS:6639 (latest revision thereof). All fasteners and clamps shall have corona free locking arrangement to guard against vibration loosening.

7.14 COMPRESSION MARKINGS

Die compression areas shall be clearly marked on each equipment designed for continuous die compressions and shall bear the words 'COMPRESS FIRST' 'suitably inscribed on each equipment where the compression begins. If the equipment is designed for intermittent die compressions, it shall bear the identification marks 'COMPRESSION ZONE' and 'NON- COMPRESSION ZONE' distinctly with arrow marks showing the direction of compression and knurling marks showing the end of the zones. The letters, number and other markings on finished equipment shall be distinct and legible.

7.25 TYPE TESTS (TO BE READ IN LINE WITH PROVISIONS OF CHAPTER-1, GTS)

7.25.1 On the complete Insulator String with Hardware Fittings

	As per relevant IS / IEC
a	Impulse voltage withstand test under dry condition
b	Impulse voltage flashover test under dry condition
c	Mechanical Strength test

d	Vibration test

Any other tests not mentioned above but are required to be carried out as per relevant IS / IEC shall also be conducted by bidder

ACCEPTANCE TESTS

7.26.1 On Both Suspension and Tension Hardware Fittings

(a)	Visual examination & Dimensional and material Verification	As per relevant IS / IEC
(b)	Mechanical damage and failure load test of each component (excluding corona control rings gradin ring and arcing horn)	
(c)	Mechanical Strength test of welded joint	
(d)	Mechanical strength test for corona control rings/ grading ring and arcing horn	
(e)	Test on locking device for ball and socket coupling	

Any other tests not mentioned above but are required to be carried out as per relevant IS / IEC shall also be conducted by bidder

CHAPTER – 8: CIVIL AND ERECTION WORKS

FOUNDATION

8.0 GENERAL

8.1 Land Development & Site Preparation

Site clearing (trees, bushes, debris, roots, waste)
Cutting, filling & leveling with proper compaction (95% Proctor)
Disposal of excess soil
Anti-termite soil treatment
Surface dressing and grading

8.2 Internal Roads & Approach Roads

Murum road construction
Proper camber and drainage slope
Culverts & cross-drainage where required

8.3 Solar Switchyard Civil Works

RCC foundations for:

33 kV VCB
Isolators
CTs, PTs
LA structures
Gantry structures

- Cable trenches (RCC / brick masonry)
- Oil soak pit (if applicable)
- Earthing pit civil works
- Gravel spreading inside switchyard

8.4 Cable Trenching (Plant to Switchyard)

- Excavation
- Sand bedding
- Cable laying
- Brick covering
- Warning tape
- Backfilling & compaction

8.5 Boundary & Security

- Chain link fencing with barbed wire
- Entry main gate
- Security cabin / guard room

8.6 Drainage System

- Peripheral storm water drains
- Switchyard drainage channels

8.7 Transmission Line Foundations

- Pole/structure foundations
- Stub setting
- PCC/RCC casting
- Backfilling & curing

8.8 ERECTION WORKS SCOPE

Switchyard Equipment Erection

- 33 kV VCB installation
- Isolator erection with earth switch
- CT/PT mounting
- Lightning Arrestor erection
- Busbar structure erection
- Gantry erection

8.9 Control Panel & Protection System Erection

- Relay panels
- Metering panels
- SCADA panel
- Battery & charger system

8.10 Transmission Line Erection

- Pole/Structure erection
- Conductor stringing
- Sag & tensioning
- Disc/polymer insulator fitting
- Jumpering
- OPGW/Earth wire stringing (if required)

8.11 Cable Laying & Termination

- 33 kV XLPE cable laying
- 11 kV LT cable laying
- Control cable laying
- Heat shrink termination
- Outdoor termination kits

8.12 Earthing System Erection

- GI/Cu earthing electrode installation
- Earth mat installation
- Equipment earthing
- Neutral earthing
- Earth resistance testing

8.13 Testing & Commissioning

- IR test
- HV test
- Protection relay testing
- CT/PT ratio test
- Breaker timing test
- Synchronization with grid
- Final charging

CHAPTER- 9: QUALITY ASSURANCE REQUIREMENT

1.0 QUALITY ASSURANCE PROGRAMME

The Bidder shall follow Quality Assurance Programme to ensure that the equipment and services under the scope of contract whether manufactured or performed at the Bidder's works or at his sub-vendor's premises or at the SGEL's site or at any other place of work are in accordance with the technical specifications. Such programme shall be outlined by the Bidder and be submitted along with the bid. The QA programme shall be generally in line with IS/ISO- 9001 and generally cover the following:

- Organisation structure for the management and implementation of the proposed quality assurance programme
- Quality System Manual
- Design Control Systems
- Documentation and Data Control Systems
- Qualification/Experience of Bidder's key personnel.
- Procedure for purchase of material, parts, components and selection of sub-vendor's services including vendor analysis, source inspection, incoming raw-material inspection, verification of materials purchased, etc.
- System for shop manufacturing and site erection controls including process, fabrication and assembly.
- Control of non-conforming items and system for corrective actions and resolution of deviations.
- Control of calibration and testing of measuring / testing equipment.
- System for Quality Audits.
- System for identification and appraisal of inspection status.
- System for authorising release of manufactured product to the Purchaser.
- System for transportation /delivery, handling, storage and preservation.
- System for maintenance of records.

2.0 GENERAL REQUIREMENTS – QUALITY ASSURANCE

2.1 All materials, components and equipment covered under scope and its technical specifications shall be procured, manufactured, erected, commissioned and tested at all the stages, as per a comprehensive Quality Assurance Programme agreed mutually.

2.2 After the award of contract, the contractor shall submit the detailed Manufacturing & Field Quality Assurance Plans for complete equipment / material during detailed engineering for approval and acceptance by SGEL in line with technical specification, Quality Assurance General Requirements, latest Industrial practices and detailed engineering.

2.3 Manufacturing Quality Assurance Plans shall detail out for all the components and equipment & various tests/inspection, to be carried out in conformity with relevant latest IS/IEC/ISO etc, quality practices and procedures to be followed by Contractor's / Sub- vendor's Quality Control Organization, the relevant reference documents, standards and acceptance norms etc. during all stages of material procurement, manufacture, assembly and final testing / factory acceptance tests.

2.4 The Field Quality Assurance Plans shall detail out the various tests/inspection to be carried out in conformity with relevant latest IS/IEC/ISO, quality practices and procedures etc. to be followed by the contractor's / sub-contractor's site Quality Control Organisation during various stages of site activities from receipt of material/equipment at site till final commissioning/ acceptance/handover.

2.5 All major items/ equipment/ components to be manufactured in house as well as procured from sub-vendors (Bought out Items, BOI) to be listed in the bid.

2.6 For components / equipment / Bought out Items procured by the contractor for the purpose of the contract, the Contractor's purchase specifications and inquiries shall call for quality plans to be submitted by the sub-vendors.

2.7 The Quality Plans shall be submitted on electronic media e.g. Pendrive or e-mail in addition to hard copy, for review and approval of SGEL. After approval, the same shall be submitted in compiled form on CD-ROM by contractor.

2.8 For all spares, replacement items and additional similar items, the quality requirements/Quality Plans as agreed for the main equipment supply shall be applicable.

2.9 All material of construction shall be as per technical specification / approved drawings / GTP.

2.10 Contractor's Plant internal standards must be traceable to acceptable International / National standards & salient points of difference (if any) shall be clearly stated with submission of plant standards. The contractor shall furnish copies of reference documents, plant standards, acceptance norms, test and inspection procedure etc. as referred in Quality Plans along with Quality Plan to SGEL. These Quality Plans and reference documents/standards etc. will be subject to approval of SGEL without which manufacturer shall not proceed. These documents shall form a part of the contract.

Tests on components and sub-assemblies shall be carried out at various stages of manufacturing, till the product undergoes the final tests in conformity with the relevant standards.

2.11 The Customer Hold Points (CHPs), identified in approved quality plan, i.e. testing checks which shall be carried out in the presence of SGEL authorized representative, beyond which the work will not proceed without written consent of SGEL's authorized representative.

2.12 The quantum of check when specified in percentage (%) / sampling basis shall be treated as per lot per sub-vendor. When the quantum of check is indicated to in whole no., then same quantum of check shall be applicable to each sub-vendor supplying the same equipment.

2.13 SGEL reserves the right to carry out quality audit and quality surveillance of the system and procedures of the contractor / or their sub-vendor. The contractor shall provide all necessary assistance to enable SGEL to carry out such details & surveillance including Quality Manuals, if required by SGEL.

2.14 All welding and brazing shall be carried out as per procedure drawn and qualified in accordance with requirement of ASME section-VIII/IX or other International equivalent standard acceptable to SGEL. All welding/brazing procedures shall be submitted to SGEL for review / verification prior to carrying out the welding/brazing. However, wherever required by SGEL, tests shall be conducted in presence of SGEL's authorized representative.

2.15 All Brazers, Welders and welding operators employed on any part of the contract either in Contractor/his sub-vendor's works or at site or elsewhere shall be qualified as per ASME section-VIII/IX or other equivalent International Standards acceptable to SGEL.

2.16 Unless otherwise proven and specifically agreed with SGEL, welding of dissimilar material and high alloy materials shall be carried out at shop only.

2.17 All non-destructive examination shall be performed in accordance with written procedures as

per International Standards. The NDT operator shall be qualified as per SNT-TC-IA (of the American or Indian Society of non-destructive examination). NDT shall be recorded in a report, which include detail of methods and equipment used, result/evaluation, job data and identification of personnel employed and details of co-relation of the test report with the job.

2.18 All material used for equipment manufacture including castings and forgings, etc. shall be of tested quality as per relevant codes/standards. Details of results of the tests conducted to determine the mechanical properties; chemical analysis and details of heat treatment procedure recommended and actually followed shall be recorded on certificates and time temperature chart. Tests shall be carried out as per applicable material standards and/or agreed details. Testing (Chemical Composition & Mechanical Properties) of major raw materials viz castings, forgings & plates shall be carried out in NABL approved / Govt approved / Govt lab.

2.19 Any other statutory requirements as applicable for the equipment / systems shall also be complied with.

2.20 The inspection calls shall be placed at least 06 weeks in advance for overseas inspections and 15 days in advance for inspections within India.

2.21 Before submitting the inspection call to SGEL for witnessing the Customer Hold Points (CHP's) and/or requesting SGEL for issuance of Material Dispatch Clearance Certificate (MDCC) based on Test Certificate (TC) review / Certificate of Conformance (COC), the contractor shall ensure that all Drawings / documents / GTP / technical data sheet, relevant to respective CHP / MDCC requirement, has been duly approved / accepted / noted by SGEL.

2.22 Contractor shall ensure readiness of offered equipment by all means, before raising such call to SGEL to attend CHP inspections. In case, SGEL authorized representative on reaching at a place of inspection found that material is not ready for inspection due to whatsoever reason, the complete inspection expenditure of SGEL engineer(s) as per actual shall be chargeable to the contractor.

2.23 Only calibrated testing & measuring instruments shall be used while performing tests during manufacturing and erection, testing & commissioning at site by the contractor. Copy of the calibration certificates will be submitted to SGEL by the contractor during inspection as an evidence.

2.24 Non-conformities observed during manufacturing, shop testing, handling, packaging, transportation, storage, preservation, erection, testing & commissioning are required to be intimated by the contractor. The acceptance/rejection of the non-conformities will be at the discretion of SGEL.

Repair/rectification procedures to be adopted to make the job acceptable shall be subject to the acceptance of SGEL /authorized representative. Action taken in accordance with decision of disposal of non-conformity for repair / rework / modification of the item / equipment and to prevent re-occurrence. The corrective and preventive action may involve modification of item / equipment, change in procedure and system etc. to achieve quality improvement at all stages and levels.

2.25 Quality audit/surveillance/approval of the results of the tests and inspection will not, however, prejudice the right of SGEL to reject the equipment if it does not comply with the specification when erected or does not give complete satisfaction in service and the above shall in no way limit the liabilities and responsibilities of the Contractor in ensuring complete conformance of the materials/equipment supplied to relevant specification, standard, data sheets, drawings etc.

2.26 No material shall be dispatched from the manufacturer's works before the same is duly

accepted, subsequent to pre dispatch/final inspection including verification of records of all previous tests/inspection by SGEL authorized representative and duly authorised for Dispatch by issuance of Material Dispatch Clearance Certificate (MDCC).

2.27 The test reports of type tests conducted as per contract, in line with requirement stipulated in the technical specification should be got accepted from SGEL concerned department before final inspection / issuance of MDCC.

2.28 All materials used or supplied shall be accompanied by valid and approved material certificates and tests and inspection reports. These certificates and reports shall indicate the heat numbers or other such acceptable identification numbers of the material. The material certified shall also have the identification details stamped on it to ensure physical correlation and traceability of material I test certificate. Such identification no. shall remain same and verifiable for all stages of manufacturing and installation.

3.0 QA DOCUMENTATION

3.1 The contractor shall be required to submit the QA Documentation in two hard copies and two CD ROMs, as identified in respective quality plan.

3.2 Each QA Documentation shall have a project specific Cover Sheet bearing name and identification number of equipment including index of its contents with page control on each document. The QA Documentation file shall be progressively completed by the Contractor/sub-vendor to allow regular reviews by all parties during the manufacturing. The final quality document will be compiled and issued at the final assembly place of equipment before despatch. However, CD-ROM may be issued not later than three weeks.

3.3 Before dispatch / commissioning of any equipment, the Contractor shall make sure that the corresponding quality document or in the case of protracted phased deliveries, the applicable section of the quality document file is completed. The Contractor will then notify the Inspector regarding the readiness of the quality document (or applicable section) for review.

3.4 The contractor shall be required to submit copies of the following quality assurance documents in original duly reviewed and accepted by contractor along with the request letter for issuance of MDCC (Material Dispatch Clearance Certificate):

- Quality Plan check list.
- Material mill test reports on components as specified in Quality Plan.
- Sketches and drawings used for indicating the method of traceability of the radiographs to the location on the equipment.
- Non-destructive examination results reports including interpretation reports.
- Calibration certificate of all meters & measuring instruments proposed to be supplied as part of relevant Billing Breakup item.
- Routine test reports for testing required as per applicable codes and standards referred in the Specifications.
- Inspection reports duly signed by authorized representative of SGEL and contractor for the agreed Customer Hold Points.
- All the accepted deviations shall be included with complete technical details.
- List of balance points if any.
- Certificates in respect of Calibration, Welders & Brazers Qualification etc.
- Copy of all reference drawings and reference technical documents
- Acceptance of Type Test Reports by SGEL.

3.5 Similarly, the Contractor shall be required to submit two sets (two hard copies and two CD ROMs), containing QA Documentation pertaining to field activities as per Approved Field Quality Plans and other agreed manuals/procedures, within 2 weeks after commissioning of

individual system.

3.6 On release of QA Documentation by Inspector, one set of quality document shall be forwarded to Corporate Quality Assurance Department and other set to Project Site. For the particular case of phased deliveries, the complete quality document to SGEL shall be issued not later than 3 weeks after the date of the last delivery of equipment.

Chapter 10 Civil Works related to Land Development, Chain Link Fencing & Internal Roads

1) The bidder has to carry put civil works related to land development which includes land cutting & filling , removal of shrubs, trees, bushes etc, & providing of internal roads & chain link fencing as detail below :-

2) **Land Development :-**
Developing the undulated land by cutting the hillock portion and earth filling pot holes developed on ground by Mechanical means for making the land levelled/plain for bisecting the co-ordinates marked on ground for carry out the work of foundation for erecting the PV Panels etc. complete and including all incidental charges or as directed by Engineer-in-charge.

3) **Internal Road :-**
   i. Excavation for roadway in earth, soil of all sorts, sand, gravel or soft murum including dressing section to the required grade, camber and side slopes and conveying the excavated materials with all lifts upto a lead of 50m. and spreading for embankment or stacking as directed. By Manual Means.
   ii. Supplying hard murum/ kankar at the road site, including conveying and stacking Complete.
   iii. Spreading hard murum/ soft murrum/ gravel or kankar for side width complete.
   iv. Compacting the hard murum side widths including laying in layers on murrum road with vibratory roller including artificial watering etc. complete.

4) **Drainage :-**
Excavation for catch/side water gutter in all sorts of soils to the specified section including stacking the excavated stuff in the regular bund and disposing of unsuitable or excess stuff as directed all sorts of soils.

5) **Chain link Fencing :-**
Providing and erecting chain link fencing 1.6 M. height with G.I. chain link of size 50 x 50 mm, 8 gauge thick and fixed 75 mm above ground level on vertical M.S. Angles of 40 x 40 x 6 mm size, including excavating pits for foundation and embedded in C.C. block of 1:4:8 mix of size 450 x450 x 670 mm. at 1.75 M. c/c with iron bar 16mm dia as hold fast including welding link with angle frame at 30 cm c/c with nuts and bolts and horizontal M.S. Angles at top and bottom of 25 x 25 x 5 mm size and vertical M.S. flat 35 x 5 mm and 25 x 5 mm horizontal including cross support of 40 x 40 x 6 mm angles both side at every corner or bend embedded in concrete blocks of 1:4:8 of size 450 x 450 x 670 mm including 3 coats of oil painting etc. complete.

********End of Section *******

As per MSEDCL
1. Power Evacuation Charges (As per MSEDCL Sanctioned Estimate)

MSEDCL has sanctioned the estimate for Power Evacuation of 3 MW Solar Power Plant under 1.3% DDF Non-Refundable Scheme for connection at 33 kV Waifad Feeder of 132/33 kV Deoli Substation, Wardha Rural–II Division.

The estimate sanctioned by MSEDCL includes:
1.3% Supervision Charges (Non-Refundable)
Material inspection, testing & certification requirements
Execution as per MSEDCL standards
Mandatory documentation (GTP, COP, Material Bills, WCR, etc.)

2. **Cost Details as per MSEDCL Letter**

Particulars

Supervision Charges @ 1.3% (Non-Refundable)
GST @ 18%
Total Amount payable to MSEDCL

Note:
The above estimate is sanctioned by MSEDCL vide Ref. SE/O&M/WRD/T/DyEE-I/No.4052 dated 24/11/2025.

3. Inclusion in Contractor's Quote

The bidder shall include the above DISCOM estimate cost in their overall quoted price.
No additional payment will be made by the Employer for MSEDCL-related charges.

4. Execution Responsibility

The contractor shall:
Carry out all works strictly as per MSEDCL sanctioned estimate.
Arrange for:

Licensed Electrical Contractor
Tri-Party Agreement (MSEDCL + Consumer + Contractor)
Material inspection & testing
GTP / COP approvals
Site supervision by MSEDCL officials
Coordinate for shutdown, testing, charging permission, meter installation, and other MSEDCL compliances.

5. **Validity of DISCOM Estimate**

MSEDCL's sanctioned estimate is valid for Six (06) Months.
If validity expires, the Employer may obtain a revised estimate.
The contractor shall comply without claiming any additional cost.

Abstract Sheet					
a	33 KV FEEDER BAY With Gantry structure & PT	No	1	---	----
b	Cost data for 33 KV S/C Line Pin type b with100 mm2 AAAC lines on 152 X 152 mm 11 mtr. RSJ	KM	10	---	----
c	33 kV 3 X 300 sqmm XLPE Underground Cable for Railway line crossing	KM	1	---	----
d	DOUPLE POLE STRUCTURE (cut point) OF-d 33 KV LINE USING 11 M LONG RSI POLE 152 x 152	NO	5	---	----
e	SINGLE POLE CUT POINT STRUCTURE FOR 33KV LINE ON RSI 13 M POLE	NO	25	---	----
A	Total estimated Material Cost (a to e)				----
1	Erection of material 15% of [A]	15% OF (A)			----
2	Labour Charges for dismantling	NIL			----
[B]	Total Services (1+2)				----
3	GST @185 on Total Material [A] & total Services [B]	18% OF (A			----
[C]	Total Estimated Cost [A+B+3				----
4	1.3% H.O Supervision charges on (Material + Labour)(A+B)	1.3%			----
5	GST @ 18% on 1.3% Normative charges Le on (4)	18%			----
[D]	1.3% Normative charges including GST (4+5)				----
[E]	Total Estimated Cost including Normative charges [C+D]				----

Maharashtra State Electricity Distribution Co. Ltd.
O&M Circle, Wardha.
Estimate for Power Evacuation of 3 MW Solar park in Rio National Cancer Institute to be connected at 33kv Walfad Feeder of 132/33kv Deoli substation MSETCL at village-Walfad Dist Wardha of Wardha Rural-il Sdn under Wardha Division in 1.3% DDF Non-Refundable
Item Code 06018

Sr.no	Description of Material	Unit	Qty
1	33 KV Lightning Arrestors. (Station type)	set	1

2	33 KV teolators without EB (800 Ame	set	2
3	33 KV VCB corriplate 1000 Amp (OD	no	1
4	33 KV P.T	no	3
6	CT 200-100/1-1 A, 33 KV	set	3
7	CSR panel for 33 KV for feeder breaker	no	1
8	Marshalling Box	LS	1
9	Structure and foundation cables, clamps, painting etc as per Table (A+C+D-F)	LS	1
10	Earthing as per Table (E)		1
	Cost of material		

Estimate for Power Evacuation of 3 MW Solar park in Rio National Cancer Institute to be connected at 33kv Waifad Feeder of 132/33kv Deoli substation MSETCL at village -Kelapur Dist Wardha of Wardha Rural-Il Sdn under Wardha Division in 1.3% DDF Non-Refundable

Sr.no	Particulars	Unit	Qty
1	RSJ 152x152, 11 m long	No	17.00
2	RSJ 116x100, 10 m long	No	2.00
3	MS Channel 100x50x6 mm	kg	132.00
4	M.S.Channel 75x40x6 mm	Kg	91.00
5	33 KV Top Fitting	No	14.00
6	MS angle 50x50x6 mm	Kg	54.00
7	M.S. Flats (50 X 10mm)	Kg	36.00
8	33 kV Pin Insulators with G.I. Pins	No	42:00
9	Disc Insulator 11 KV 70 KN	No	54.00
10	G.I.Nut Bolts	Kg	80.00
11	Strain Hardware for Dog0.1 or Equ.AAAC	No	18.00
12	AAAC 100 mm2	Mtrs	3150.00
13	H.T.Stay Set	No	6.00
14	G.I.Stay Wire 7/4mm(8 SWG)	Kg	60.00

15	G.I.Wire 8 SWG/6 SWG	Kg	130.00
16	Sleve Joints	No	3.00
17	Danger Board in yard.	No	17.00
18	Earthing Sets H.T	No	17.00
19	Concreting ration 1:3:6	Cmt	17.50
20	G.I.Barbed Wire 'A' type.	Kg	80.00
21	Black bituminus paint	Ltr	6.00
22	Red Oxide Paint for 2 coats	Ltr	20.00
23	Aluminium Paint for 1 coat	Ltr	9.00
24	Sundries	Ls	LS
25	Wedge connectors		
26	DOG to DOG or equivalent AAAC	no	18

Maharashtra State Electricity Distribution Co. Ltd.

O & M Circle, Wardha

Estimate for Power Evacuation of 3 MW Solar Park in R/o National Cancer Institute

to be connected at 33 kV Waifad Feeder of 132/33 kV Deoli Substation MSETCL
at village Kelapur, Dist. Wardha of Wardha Rural-II S/dn
under Wardha Division in 1.3% DDF Non-Refundable

item Code 0799 – 33 kV 3 × 300 sqmm XLPE Underground Cable for Railway Line Crossin

Bill of Material

Item code 0703

S.N.	Description of Material	Unit	Qty
1	RSJ 152×152, 13 m long	No.	4
2	M.S. Channel 75×40×6 mm	Kg	60
3	MS Channel 100×50×6 mm	Kg	100
4	MS Angle 50×50×6 mm	Kg	22
5	M.S. Flat 50×6 mm	Kg	24
6	33 kV Isolators with EB (800 A)	No.	2
7	33 kV Pin Insulators with G.I. Pins	No.	6
8	AAAC 100 mm^2	Kg	100

9	XLPE Cable 33 kV, 3C, 300 mm^2	Rmt	320
10	R.C.C. Pipe 150 mm × 2 m	Nos.	35
11	Black Bituminous Paint	Ltr.	2
12	Red Oxide Paint (2 coats)	Ltr.	6
13	Aluminium Paint (1 coat)	Ltr.	4
14	33 kV Heat Shrink Outdoor Termination Joint (Al) Kit for XLPE 3C × 300 sqmm	No.	4
15	Sand	Cmt	500
16	Misc. for XLPE U/G Cable	LS	2

Maharashtra State Electricity Distribution Co. Ltd.

O & M Circle, Wardha

Estimate for Power Evacuation of 3 MW Solar park in R/o National Cancer Institute

to be connected at 33 kV Waifad Feeder of 132/33 kV Deoli Substation MSETCL
at village Kelapur, Dist. Wardha of Wardha Rural-II Sdn
under Wardha Division in 1.3% DDF Non-Refundable
Bill of Material

Item code No 0712

S.N.	Description of Material	Unit	Qty
1	RSJ 152×152, 11 m long	No.	2
2	M.S. Flats (50×10 mm)	Kg	10
3	MS Channel 100×50×6 mm	Kg	46
4	MS Angle 50×50×6 mm	Kg	50
5	33 kV Guarding Channel MS100×50	Kg	80
6	33 kV Pin Insulators with GI Pins	No.	3
7	Strain Hardware for Dog 0/1 or Equivalent AAAC	Set	6
8	Disc Insulator 11 kV 70 KN	No.	18
9	H.T. Stay Set	No.	4
10	G.I. Stay Wire (7/4 mm – 8 SWG)	Kg	20
11	Earthing Sets H.T.	No.	2
12	G.I. Wire 8 SWG & 6 SWG	Kg	6
13	G.I. Barbed Wire 'A' Type	Kg	7
14	Danger Board in M.S.	No.	2
15	Black Bituminous Paint	Ltr.	1
16	Red Oxide Paint for 2 Coats	Ltr.	3
17	Aluminium Paint for 1 Coat	Ltr.	2
18	Concreting Ratio 1:3:6	Cmt.	2
19	Sundries Total Cost	LS	1

Maharashtra State Electricity Distribution Co. Ltd.

O & M Circle, Wardha

Estimate for Power Evacuation of 3 MW Solar Park in R/o National Cancer Institute

To be connected at 33 kV Waifad Feeder of 132/33 kV Deoli Substation MSETCL at Village – Kelapur, Dist. Wardha of Wardha Rural-II S/dn under Wardha Division in 1.3% DDF Non-Refundable.
Item Code No. 0714

SINGLE POLE CUT POINT STRUCTURE FOR 33 kV LINE ON RSJ 13 M POLE

S.N.	Description of Material	Unit	Qty
1	RSJ 152×152, 13 m long	No.	1
2	RSJ 152×152, 12 m long	No.	1
3	MS Channel 100×50×6 mm	Kg.	35
4	MS Angle 50×50×6 mm	Kg.	50
5	33 kV Guarding Channel MS 100×50	Kg.	40
6	Strain Hardware for Dog Conductor / AAAC equivalent	No.	6
7	Disc Insulator 11 kV 70 kN	No.	18
8	H.T. Stay Set	No.	2
9	G.I. Stay Wire 7/4 mm (8 SWG)	Kg.	10
10	Earthing Sets H.T.	No.	1
11	G.I. Wire 8 SWG / 6 SWG	Kg.	2
12	G.I. Barbed Wire ‘A’ type	Kg.	2
13	Danger Board in yard	No.	1
14	Concreting Ratio 1:3:6	Cmt.	1.5
15	Black Bituminous Paint	Ltr.	0.5
16	Red Oxide Paint for 2 coats	Ltr.	1.5
17	Aluminium Paint for 1 coat	Ltr.	1
18	Sundries	LS	1
	Total Cost		

33 kV Overhead Line + Underground Cable

Sr	Item / Location	Typical Technical Rating / Spec (for 3 MW @ 33 kV)	Qty in your scope*	Remarks
1	33 kV S/C Overhead line with AAAC conductor	System voltage 33 kV, S/C AAAC **100 mm²** (or equivalent "Dog/Weasel" as per MSEDCL std), pin insulators, GI cross-arm, disc insulators at angle/terminal, stay sets, earthing	**≈10 km** (as per DISCOM estimate – b)	Plant gantry to MSEDCL yard complete OH line construction
2	33 kV 3C × 300 mm² XLPE underground cable (Railway / road crossing)	36 kV grade, 3-core, 300 mm² Al conductor, XLPE insulation, earthed copper screen, FRLS outer sheath, short-circuit rating ≥25 kA for 1 sec	**1 km** (as per c)	Jointing kits, end termination kits, route markers, trenching, sand, tiles, backfilling
3	Double pole structure (cut-point) with 11 m RSJ poles	RSJ 152×152 mm, min. 11 m, GI bracings, 33 kV post / disc insulators, channel cross-arm, earthing	**5 Nos** (as per d)	Line sectioning / tapping points
4	Single pole cut-point structure with 11 m RSJ	RSJ 152×152 mm, 33 kV pin/post insulators, cross-arm, earthing, stays	**25 Nos** (as per e)	Intermediate cut points / angle locations
5	Line accessories & earthing	All fittings for AAAC (clamps, PG clamps, armour rods, suspension & tension sets), GI earthing sets at every DP/SP,	As per design	Include in BOQ as "line hardware & earthing accessories – complete"

		stay sets, danger boards, number plates		

3 kV feeder bay with gantry structure & PT

Sr	Equipment (Sub-station end)	Technical Rating / Specification	Qty in your scope
1	33 kV Feeder VCB (Outdoor)	36 kV, **1250 A**, **25 kA for 3 sec**, 3-pole, motor operated, spring-charged, 50 Hz, suitable for remote operation, IP55 kiosk with protection relay	1 Set
2	33 kV Isolator with Earth Switch – Line side	36 kV, **630/800 A**, 25 kA short-time, 3-pole, horizontal / vertical break, manual / motor drive, with earth switch	1 Set
3	33 kV Isolator with Earth Switch – Bus side	36 kV, 630/800 A, 25 kA short-time, 3-pole, with earth switch	1 Set
4	Current Transformers (CTs) for feeder bay	36 kV, **primary 100/1-1 A** (suitable for feeder current ≈52 A), 2 or 3 core: metering (class 0.5, 15 VA), protection (class 5P10/5P20, 15 VA)	3 Nos (R-Y-B)
5	Potential / Voltage Transformers (PTs)	33 kV/√3 / 110 V/√3, 3-phase, 50 Hz, class 0.5 / 1.0, 100 VA or as per utility std	3 Nos (or 1 set of 3-phase)
6	Lightning Arresters (LAs)	33 kV class, metal-oxide gap-less, polymer housed, **10 kA** discharge, station type	3 Nos
7	33 kV Bus bar & jumpers	GI / Al tubular bus, rated 36 kV, 1250 A with adequate short-circuit strength; AAAC jumpers with clamps	As per bay layout
8	Terminal gantry structure	33 kV line termination gantry with post / disc insulators, clamps, jumpering to isolator	1 Set
9	Control & Relay (C&R) panel for solar feeder	Numerical relay (O/C, E/F, SEF, UV/OV, 50/51/51N, synchro-check if required), energy meter (ABT / TOD), control switches, annunciation, DC supply interface	1 Panel
10	Station earthing for bay	Earthing mat extension, risers to all equipment, step & touch potential as per IS/IEEE	1 Lot
11	Cable from bay to C&R panel	1.1 kV XLPE Cu control cables – 2C/4C/10C/12C etc for tripping, indications, metering	As per design

HT Panel termination side

Sr	Item	Specification	Qty

1	Termination at Solar HT Panel	33 kV cable box / outdoor termination of the 33 kV line (or XLPE cable) at solar plant HT panel; suitable for 36 kV, 3C × 300 mm^2 किंवा line conductor size	1 Set
2	Plant-side LA / line isolator (if required by DISCOM)	33 kV LA, 10 kA, polymer; 36 kV, 630 A line isolator with ES	As per final interface scheme

33 kV Common components

1. **System Details (Common for all equipment)**
Plant capacity: 3 MW AC
Voltage level: 33 kV system, 36 kV max equipment rating
Frequency: 50 Hz ± 3 %
Short-circuit level at 33 kV bus: 25 kA for 3 sec (confirm with DISCOM – can be edited)
Insulation level:
170 kVp lightning impulse (BIL)
70 kV (rms), 1 min power frequency withstand (dry & wet)
Ambient conditions: Max ambient temp: 50 °C
Altitude: up to 1000 m above MSL
Pollution level: Medium/Heavy – creepage ≥ 25 mm/kV
Standards generally: IEC/IS 62271 series, 61869 (CT/PT), 60099 (LA), IS 3043 (earthing) etc.

2. 33 kV Vacuum Circuit Breaker (VCB) – Outdoor / Panel Type
Type: 3-phase, 50 Hz, vacuum interrupter, motor-operated spring mechanism
Rated voltage: 36 kV
Rated current: 1250 A (min)
Short-circuit breaking current: 25 kA for 3 sec
Making current: 63 kA peak (or as per 2.5 × Isc)
Duty cycle: O – 0.3 s – CO – 3 min – CO
Mechanical life: 10,000 operations or more
Electrical life: as per IEC
Auxiliary supply: 110 V DC or 220 V DC (for closing/tripping), 230 V AC for space heaters
Control features:
Local/remote operation from C&R panel
ON/OFF & Spring Charged indications
Trip coil supervision, anti-pumping
Enclosure:
For outdoor breaker: IP55 or better
For panel type: indoor metal-clad, IP4X front / IP2X elsewhere
Interlocks:
Electrical & mechanical interlock with isolators as per scheme
Standards: IEC/IS 62271-100, 62271-1
3. 33 kV Isolators with Earth Switch (Line & Bus Side)
Type: Outdoor, 3-pole, centre-break / double-break type
Rated voltage: 36 kV
Rated current: 630 A or 800 A
Short-time withstand: 25 kA for 3 sec
Peak withstand: 63 kA
Earth switch:
Make-proof and self-interlocked with main isolator
Short-time current and peak current rating same as isolator
Operation: manual with operating rods/gear box; pad-lockable

Mounting: on galvanized steel structure
Insulators: solid core porcelain/polymer, creepage ≥ 25 mm/kV
Interlocking: Breaker cannot be closed unless paralleling isolators are closedEarth switch cannot be closed unless main isolator is open
Degree of protection for mechanism boxes: IP55
Standards: IEC/IS 62271-102

4. 33 kV Current Transformers (CTs)

Type: Outdoor, single-phase, oil-filled or cast-resin
Rated system voltage: 36 kV, insulation level 170/70 kV
Primary current: choose as per design (100/1 A or 75/1 A typical for 3 MW)
Secondary current: 1 A
Cores:
Metering core: Class 0.2s or 0.5, burden 10–15 VA
Protection core: Class 5P10 / 5P20 or PS, burden 15–30 VA
Minimum 2 cores (1 metering, 1 protection) – 3 cores preferred
Short-time thermal rating: same as bus fault level (25 kA for 3 s)
Mechanical: suitable for upright mounting on structure, with terminal box IP55
Standards: IEC/IS 61869-2

5. 33 kV Potential / Voltage Transformers (PTs / VTs)

Type: Outdoor, single-phase, electromagnetic VT
Rated voltage: 33 kV / $\sqrt{3}$ / 110 V / $\sqrt{3}$
Burden: ≥ 100 VA per phase (protection + metering)
Accuracy:
Metering: Class 0.2 or 0.5
Protection: Class 3P
Connection: star/star or star/open-delta as per utility requirement
Insulation level: 170/70 kV
Secondary:
Separate windings for metering & protection
Fuses on secondary side, terminal box IP55
Standards: IEC/IS 61869-3

6. 33 kV Lightning Arresters (LAs)

Type: Non-linear metal oxide gapless arresters, station class
System voltage: 33 kV
Rated voltage: 30 kV rms or as per utility
Nominal discharge current: 10 kA
Energy handling: suitable for medium-voltage substations
Mounting: on dedicated LA structures with separate earth electrodes bonded to main grid
Leakage current indication / disconnecting device preferred
Creepage distance as per pollution level
Standards: IEC/IS 60099-4

7. Busbar, Post Insulators & Jumpers

Busbar / Main Conductor
Type: Rigid aluminium tubular or ACSR Dog / Panther conductor

Continuous current rating: ≥ 630 A (preferably 1250 A) at 50 °C ambient

Short-time withstand: as per 25 kA 3 s
Adequate clearance:
Phase-to-phase & phase-to-earth clearances as per IEC 62271-1 for 36 kV
Post Insulators
Rated voltage: 36 kV
BIL: 170 kVp
Creepage distance: ≥ 25 mm/kV (i.e. ≥ 825 mm)
Material: solid core porcelain or polymer, suitable for outdoor duty
Jumpers / Connectors
Conductor: same as bus or flexible aluminium stranded
All clamps / connectors / lugs: aluminium/bi-metallic, tinned copper where required, suitable for short-circuit duty

9. Energy Metering (Main & Check Meter)

Type: 3-phase, 4-wire, static meter, suitable for 33 kV export metering
Accuracy class: 0.2s (main), 0.2s / 0.5s (check)
Functions:
Import/export kWh, kVAh, kVArh
TOD/TOU, MD recording
Harmonics & event logging (preferable)
Interface: RS-485 / optical port, DLMS compliant as per DISCOM
Power supply: 3-phase self-powered or auxiliary supply as specified by DISCOM

10. DC System – Battery & Charger

DC Voltage: 110 V DC (or 48 V DC – match your relay/VCB requirements)

Battery:
Type: VRLA / SMF / Ni-Cd
Autonomy: 8–16 hours for all bay loads with safety margin
Rack, inter-cell links, fuses, monitoring
Charger:
Float-cum-boost, automatic, with voltage & current limit
Input: 230 V AC; Output: 110 V DC
Protections: overload, short-circuit, input & output MCB
All As per relevant and latest IS standards

11. Control, Power & Lighting Cables

Control cables:
1.1 kV, Cu, armoured, PVC/XLPE insulated, FRLS outer sheath
Size: 2.5 mm^2, multi-core (2C, 4C, 6C, 10C etc. as per schedule)
AC power cables:
1.1 kV, Al/Cu, 3.5C x suitable size for ACDB, lighting etc.

Laying:
In RCC/brick trenches, GI trays or underground with sand & bricks
Termination:
Crimped lugs, brass glands, ferruling at both ends
All As per relevant and latest IS standards

12. Earthing System

Design as per IS 3043
Earth grid:
Main conductor: GI flat 50 × 6 mm or 75 × 10 mm, hot-dip galvanized
Grid laid all around switchyard with cross-meshes
Earth electrodes:
GI pipe / copper-bonded rod electrodes at grid nodes
Depth to achieve earth resistance ≤ 1 Ω (for LA pits even lower if possible)
All equipment (VCB, CT, PT, LA, structures, fences etc.) to be connected with two distinct earth connections
Separate earth pits for lightning arresters, bonded to main grid
Earth pits with RCC covers, test links for measurement
All As per relevant and latest IS standards

13. Structures, Civil & Miscellaneous for substation

Equipment structures:
Hot-dip galvanized steel, min zinc coating > 610 g/m^2 as per IS 4759
Designed for local wind speed, seismic zone, and clearances for 36 kV
Gantry:
Adequate height for line termination & bus connection
Cable trench:
RCC/brick, with removable covers, slope for drainage
Yard surfacing:
Gravel / metal spread or PCC to prevent vegetation and improve safety
All As per relevant and latest IS standards

Fencing:
Chain-link fence with barbed wire, earthing of fence and gate
Signage:
Danger boards, equipment nameplates, single-line diagram board, earthing schematic
All As per relevant and latest IS standards

Note: Bidders seeking approvals for land, line, railway, discom, cutting, or any similar activities must coordinate directly with NCI.

A. ITEMS needed for power evacuation 33KV line

Sr	Item Description	Technical Specification	Qty	Unit
1	**33 kV Feeder Bay with Gantry & PT**	36 kV, outdoor bay complete with gantry & PT	1	Set
2	**33 kV S/C Overhead Line with AAAC**	100 mm^2 AAAC on 11 m RSJ poles	10	Km
3	**33 kV 3C × 300 mm^2 XLPE Underground Cable**	Railway / road crossing	1	Km
4	**Double Pole Cut-Point Structure**	11 m RSJ poles	5	Nos

5	**Single Pole Cut-Point Structure**	11 m RSJ poles	25	Nos
6	**Material handling, CST, supervision & normative charges**	As per DISCOM norms	L.S.	—

ITEMS if required

Sr	Item Description	Technical Specification	Qty	Unit
1	**33 kV Cable Termination at Solar HT Panel**	36 kV grade, suitable for **3C × 300 mm^2 XLPE cable**, outdoor termination kit with glands & stress cones	1	Set
2	**33 kV Line Isolator with Earth Switch (Plant Side)**	36 kV, 630 A, 25 kA, 3-pole with mounting structure	1	Set
3	**Lightning Arresters (Plant Side)**	33 kV, 10 kA, polymer type	3	Nos
4	**Structure Foundation & Earthing for Isolator & LA**	RCC foundation, GI strip, 2 earth pits & interconnection	1	Lot

PART-C OF TECHNICAL SPECIFICATION of internal roads along with drainage system, Prefab security cabin

Land Development Works for 3 MW Solar Plant (16.65 Acres)

Item No	Description	Unit	Qty
1	Security Cabin (10×10ft) Pri fab	Nos	1
2	4 Meter width Murum 495 meter road 300mm thickness	Rmt	495 meter Tentative (Bidder has to do site survey)
3	Drainage system (495 meter)	Rmt	495 meter Tentative (Bidder has to do site survey)
4	Land developing, land cutting & filling, removal of shrubs, trees, bushes	Acers	16.65 Acers land

For road (4m)

- Providing and constructing 4.0 m wide murum road in 300 mm compacted thickness in three layers of 100 mm each using approved hard murum, including clearing of site, dressing and preparation of subgrade, spreading of murum in layers, watering to optimum moisture content, compaction with vibratory roller to achieve required density, maintaining proper camber and line & level, complete as directed by Engineer-in-Charge.

Roads

- Internal service road width: **4Meters**
- Road materials: Gravel/Murrum layer (300 mm thickness).
- Culverts to be provided wherever drainage channels intersect road paths.

5. Site Drainage System

- Peripheral drainage trench around entire plot.
- Cross drains and culverts at all road crossings.
- Earth grading to promote natural drainage flow.
- PCC drains to be provided if the site is low-lying or waterlogging-prone.

Deliverables

- No stagnation of rainwater within plant area.
- Solar modules always remain protected from waterlogging.

6. Security Cabin / Watchman Room

- Size: **10×10 ft**
- Construction: Brick masonry or prefabricated cabin.
- Roof: RCC slab or GI sheet roofing.
- Facilities:
    - Electrical points
    - Water supply
    - Small toilet
    - Night lighting

7. Soil Testing (Geotechnical Investigation)

Mandatory for:

- Module mounting structure foundations
- Inverter/Control room foundations
- Transformer / equipment platforms
- 33 kV switchyard foundations

Tests Required

- Soil Bearing Capacity (SBC)
- Standard Penetration Test (SPT)
- Groundwater table assessment
- Chemical tests (Chloride, Sulphate, etc.)

10. Labour & Site Safety Setup

- Temporary labour tents or shelters.
- First-aid box at site.
- PPE storage area.
- Mandatory display of safety signboards: “Danger”, “Men at Work”, “PPE Compulsory”.

11. Site Survey & Peg Marking

- DGPS survey and topographic survey.
- Total Station marking for layout.
- Boundary demarcation and peg marking for:
    - Module array rows
    - Inverter/transformer pads
    - Internal roads
    - Cable trenches
    - Pole locations

Deliverables

- Final layout marking for module tables and all plant infrastructure areas.

13. Module Area Compaction

- Entire module installation area to be compacted properly.
- Anti-weed chemical spray to prevent plant growth under module tables.

SECTION – V

BID RESPONSE SHEETS (BRS)
&
ANNEXURES

BID FORM

To
Chief General Manager (RESCO II) (Designation),
Mahatma Phule Renewable Energy & Infrastructure Technology Limited.,
B-501 Pinnacle Corporate Park, Next to Trade Center,
BKC, Bandra (East), Mumbai – 400051.

Subject: Tender for Land Development and Power Evacuation works with 33KW switch yard at **National Cancer Institute Nagpur** for the capacity **3 MW** which includes land cutting & filling, removal of shrubs, trees, bushes etc., & providing of internal roads and drainage with Power Evacuation & Transmission Infrastructure up to Inter Connection Point of STU for setting up Solar Project(s) in the State of Maharashtra**.**

Dear Sir,

After examining / reviewing the Bid Documents for Notice inviting tender for Land Development and Power Evacuation works which includes land cutting & filling , removal of shrubs, trees, bushes etc, & providing of internal roads & chain link fencing with Power Evacuation & Transmission Infrastructure up to Inter connection Point of STU & obtaining connectivity with STU for setting up Solar Parks / Solar Project(s) in the State of Maharashtra vide Bid Documents No – _____comprising "Notice Inviting Tender", "Instructions to Bidders", "Technical Specification", "Conditions of Contract", "Bid Response Sheets [BRS], Attachments & Annexures" etc., including amendments/ addendums/ corrigendum / clarifications to the Bid Documents, the receipt of which is hereby duly acknowledged, we, the undersigned Bidder, express to execute the whole part of the work in conformity with the said Bid Documents.

1. We hereby confirm that this Bid is valid for a period of 180 Days "from the last date of bid closing as per NIT or any extension thereof", and it shall remain binding upon us and may be accepted by any time before the expiry of that period.
2. Until a final Agreement is prepared and executed, the Bid together with your written acceptance thereof in your Letter of Award shall constitute a binding Agreement between us.
3. We understand that Bid Documents is not exhaustive and any action and activity not mentioned in Bid Documents but may be inferred to be included to meet the intent of the Bid Documents shall be deemed to be mentioned in Bid Document unless otherwise specifically excluded and we confirm to perform for fulfilment of "Agreement" and completeness of the Work in all respects within the time frame and agreed price.
4. **ATTACHMENTS TO THE BID FORM**

   In line with the requirement of the Bid Document, we enclose herewith the following Attachments to the Bid Form:

   I. Attachment-1: Power of Attorney
   A power of attorney, as per Clause No 2.12.3, indicating that the person(s) signing the Bid has the authority to sign the Bid and that the Bid is binding upon the Bidder during the full period of its validity in accordance with Clause No 2.11.

   II. Attachment-2: Submission of GST Details
   Bidders have to submit the GST details of their company at Attachment- 2 of Section-V: BRS & Annexures of this Bid Document.

   III. Attachment-3: Bid Security/Earnest Money Deposit requirement
   Bidder shall submit the Bid security/EMD requirement as per format specified at Annexure-9 of Section-V: BRS & Annexures of this Bid Document.

   IV. Attachment-4:Pre- Contract Integrity Pact
   Integrity Pact duly signed between Employer and the Bidder in accordance with Clause No 2.30.

   V. Attachment-5: Declaration regarding Blacklisting

   VI. Attachment-6: No Deviation Certificate
   The Bidders shall submit a "No Deviation Certificate" to the updated bidding document in accordance with Clause No 2.13 of this Bid Document.

   VII. Attachment-7: Electronic Fund Transfer (EFT) details of the Bidder.

   VIII. Attachment-8: Technical Criteria
   Bidder shall submit the technical data in the prescribed format along with scanned copy of all the supporting documents to demonstrate fulfillment of the eligibility criteria as per Clause No.

1. 3 of this Bid Document.

IX. **Attachment-9: Financial Criteria**
Bidder shall submit the financial data in the prescribed format along with scanned copy of all the supporting documents to demonstrate fulfillment of the eligibility criteria as per Clause No. 1. 3 of this Bid Document.

X. **Attachment -10: Time Schedule**
Bidder shall submit the detailed activity wise Time schedule (L1 Schedule) for each unit for which the bidder is seeking qualification in the form of PERT Chart covering all aspects like ordering, site preparation, Supply, erection, installation, testing & commissioning, etc. along with the bid.

XI. **Attachment-11: List of Vendors/sub-contractors proposed to be engaged.**

XII. **Attachmnt-12: Mandatory Information to be submitted by the Bidder.**

XIII. **Attachment -13: Undertaking regarding restrictions imposed by the Government of India.**

XIV. **Attachment -14: Deleted**

XV. **Attachment -15: Estimated Bill of Quantities**

XVI. **Attachment-16: Schedule of Tools & Tackles for Erection, Testing, Commissioning and O&M for each unit for which the bidder is seeking qualification.**

XVII. **Attachment no 17: Deleted**

PRICE SCHEDULES --- Attachment no. 18. (To be submitted in the price bid envelop only)

In line with the requirements of the Bid Document, we confirm that we have uploaded the price schedule in electronic form in e-tendering portal.

Place: **Name:**
Date: **Designation:**
Name of Company:

Duly authorized to sign Bid for and on behalf of___(name of firm/company)

Business Address for communication	:
Telephone No	:
Fax No	:
E-mail address	:
Legal status	: Company/Firm:
Place of incorporation	:

ATTACHMENT 1

POWER OF ATTORNEY

Bidder to furnish Power of Attorney in accordance with ITB Clause of this Bid Document.

ATTACHMENT 2

GST DETAILS

Bidders have to submit the GST details of their company.

(Name and Signature of the Authorized Signatory)

ATTACHMENT 3

COST OF BID DOCUMENT & BID SECURITY/EARNEST MONEY DEPOSIT

Bidder to furnish Bid Security in line withITB Clause 1.8 and as per Format Given at Annexure-9 Section-V (Annexures)

(BID SECURITY IN SEPARATE SEALED ENVELOPE)

(Name and Signature of the Authorized Signatory)

ATTACHMENT 4

FORMAT FOR PRE-CONTRACT INTEGRITY PACT

Between

_____, a company incorporated under the relevant law in the matter and having its registered office at___ _____, hereinafter referred to as "The Employer" whichexpression shall mean and include, unless the context otherwise requires, his successors in office andassigns of the **First Part.**

AND

M/s____, a company/ firm/ individual (status of the company) constituted in accordance with therelevant law in the matter and having its registered office at____represented byShri_____, hereinafter referred to as "The Bidder/Contractor" which expression shall mean and include, unless the context otherwise requires, his successors and permitted assigns of the **Second Part**.

WHEREAS the Employer proposes to procure under laid down organizational procedures, contract/s for (Name of the work/ goods/ services) and the Bidder/Contractor is willing to offer against NIT No. MAHAPREIT/RESCO-01/25-26

NOW, THEREFORE,

To avoid all forms of corruption by following a system that is fair, transparent and free from any influence/prejudiced dealings prior to, during and subsequent to the currency of the contract to be entered into with a view to:-

Enabling the Employer to obtain the desired said (work/ goods/ services) at a competitive price in conformity with the defined specifications by avoiding the high cost and the distortionary impact of corruption on public procurement, and

Enabling the Bidder(s)/Contractor(s) to abstain from bribing or indulging in any corrupt practice in orderto secure the contract by providing assurance to them that their competitors will also abstain from bribing and other corrupt practices and the Employer will commit to prevent corruption, in any form, byits officials by following transparent procedures.

1. COMMITMENTS OF THE EMPLOYER

1.1. The Employer undertakes that no official of the Employer, connected directly or indirectly with the contract, will demand, take a promise for or accept, directly or through intermediaries, any bribe, consideration, gift, reward, favour or any material or immaterial benefit or any other advantage from the Bidder/Contractor, either for themselves or for any person, organization or third party related to the contract in exchange for an advantage in the bidding process, bid evaluation, contracting or implementation process related to the contact.

1.2. The Employer will, during the pre-contract stage, treat all the Bidders/Contractors alike, and will provide to all the Bidders/Contractors the same information and will not provide any such information to any particular Bidder/Contractor which could afford an advantage to that particular Bidder/Contractor in comparison to other Bidders/Contractors.

1.3. All the officials of the Employer will report to the appropriate Authority any attempted or completed breaches of the above commitments as well as any substantial suspicion of such a breach.

1.4. In case any such preceding misconduct on the part of such official(s) is reported by the Bidder to the Employer with full and verifiable facts and the same is prima facie found to be correct by the Employer, necessary disciplinary proceedings, or any other action as deemed fit, including criminal proceedings may be initiated by the Employer or Independent External Monitor and such a person shall be debarred from further dealings related to the contract process. In such a case while an enquiry is being conducted by the Employer the proceedings under the contract would not be stalled.

2. COMMITMENTS OF THE BIDDER(S)/CONTRACTOR(S)

The Bidder(s)/Contractor(s) commits itself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of its bid or during any pre-contract or post-contract stage in order to secure the contract or in furtherance to secure it and in particularcommit itself to the following:

2.1 The Bidder(s)/Contractor(s) will not offer, directly or through intermediaries, any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission,fees, brokerage or inducement to any official of the Employer, connected directly or indirectly withthe bidding

process, or to any person, organization or third party related to the contract in exchange for any advantage in the bidding, evaluation, contracting and implementation of the contract.

2.2 The Bidder/Contractor further undertakes that it has not given, offered or promised to give, directlyor indirectly any bribe, gift consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the Employer or otherwise in procuring the Contract or forbearing to do or having done any act in relation to the obtaining or execution of the contract or any other contract with Employer for showing or forbearingto show favour or disfavour to any person in relation to the contract or any other contract with Employer.

2.3 The Bidder(s)/Contractor(s) shall disclose the name and address of agents and representatives and Indian Bidder(s)/Contractor(s) shall disclose their foreign principals or associates.

2.4 The Bidder(s)/Contractor(s) shall disclose the payments to be made by them to agents/brokers orany other intermediary, in connection with this bid/contract

2.5 The Bidder, either while presenting the bid or during pre-contract negotiations or before signing the contract, shall disclose any payments he has made, is committed to or intends to make to officials of the Employer or their family members, agents, brokers or any other intermediaries in connection with the contract and the details of services agreed upon for such payments.

2.6 The Bidder/Contractor will not collude with other parties interested in the contract to impair the transparency, fairness and progress of the bidding process, bid evaluation, contracting and implementation of the contract.

2.7 The Bidder/Contractor will not accept any advantage in exchange for any corrupt practice, unfair means and illegal activities.

2.8 The Bidder/Contractor shall not use improperly, for purposes of competition or personal gain, or pass on to others, any information provided by the Employer as part of the business relationship,regarding plans, technical proposals and business details, including information contained in electronic data carrier. The Bidder/Contractor also undertakes to exercise due and adequate care lest any such information is divulged.

2.9 The Bidder(s)/Contractor(s) commits to refrain from giving any complaint directly or through any other manner without supporting it with full and verifiable facts.

2.0 The Bidder(s)/Contractor(s) shall not instigate or cause to instigate any third person to commit anyof the actions mentioned above.

2.10 If the Bidder/Contractor or any employee of the Bidder/Contractor or any person acting on behalf of the Bidder/Contractor, either directly or indirectly, is a relative of any of the officers of the Employer, or alternatively, if any relative of an officer of the Employer has financial interest/stake in the Bidder(s)/Contractor(s) firm (excluding Public Ltd. Company listed on Stock Exchange), the same shall be disclosed by the Bidder/Contractor at the time of filling of tender.

2.11 The term 'relative' for this purpose would be as defined in Section 2(77) of the Companies Act 2013.

2.12 The Bidder(s)/Contractor(s) shall not lend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any employee of the Employer.

2.13 The Bidder/supplier shall follow all rules and regulations of India including statutory requirements like minimum wages, ESIC and EPF.

3. PREVIOUS TRANSGRESSION

3.1 The Bidder(s)/Contractor(s) declares that no previous transgression occurred in the last three years immediately before signing of this Integrity Pact, with any other company in any country in respect on any corrupt practices envisaged hereunder or with any Public Sector Enterprise / Government Department in India and in (Employer's country).

3.2 The Bidder agrees that if it makes incorrect statement on this subject, Bidder can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason

4. EARNEST MONEY (SECURITY DEPOSIT)

The provision regarding Earnest Money/Security Deposit as detailed in the Notice Inviting Tender (NIT) and Instruction to Bidders (ITB) section of the Bid Document is to be referred.

5. SANCTIONS FOR VIOLATIONS

5.1 Any breach of the aforesaid provisions by the Bidder/Contractor or any one employed by it or acting on its behalf shall entitle the Employer to take action as per the procedure mentioned in the "Guidelines on

Banning of Business Dealings" attached as Annex-A and initiate all or any one of the following actions, wherever required:

(i) To immediately disqualify the bidder and call off the pre contract negotiations without assign-ing any reason or giving any compensation to the Bidder/Contractor. However, the proceed-ings with the other Bidder(s)/Contractor(s) would continue.

(ii) The Earnest Money Deposit (in pre-contract stage) and/or Security Deposit/Performance Bond (after the contract is Signed) shall stand forfeited either fully or partially, as decided by the Employer and the Employer shall not be required to assign any reason thereof.

(iii) To immediately cancel the contract, if already signed, without giving any compensation to the Contractor. The Bidder/Contractor shall be liable to pay compensation for any loss or damage to the Employer resulting from such cancellation/rescission and the Employer shall be entitled to deduct the amount so payable from the money(s) due to the Bidder/Contractor.

(iv) To encash the Bank guarantee, in order to recover the dues if any by the Employer, along with interest as per the provision of contract.

(v) To debar the Bidder/Contractor from participating in future bidding processes of Employer, as per provisions of "Guidelines on Banning of Business Dealings" (**Annex-A**), which may be further extended at the discretion of the Employer.

(vi) To recover all sums paid in violation of this Pact by Bidder(s)/Contractor(s) to any middlemanor agent or broker with a view to securing the contract.

(vii) In cases where irrevocable Letters of Credit have been received in respect of any contract signed by the Employer with the Bidder/ Contractor, the same shall not be opened/operated.

(viii) Forfeiture of Performance Security in case of a decision by the Employer to forfeit the same without assigning any reason for imposing sanction for violation of this Pact.

5.2 The Employer will be entitled to take all or any of the actions mentioned at para 5.1 (i) to (viii) of this Pact also on the Commission by the Bidder/Contractor or any one employed by it or acting on its behalf (whether with or without the knowledge of the Bidder/Contractor), of an offence as defined in Chapter IX of the Indian Penal Code, 1860 or Prevention of Corruption Act, 1988 or any other statute enacted for prevention of corruption in Employer's country.

5.3 The decision of the Employer to the effect that a breach of the provisions of this Pact has been committed by the Bidder / Contractor shall be final and conclusive on the Bidder / Contractor. However, the Bidder/Contractor can approach the Independent External Monitor(s) appointed for the purposes of this Pact.

6. INDEPENDENT EXTERNAL MONITOR(S)

6.1 The Employer has appointed Independent External Monitor(s) (hereinafter referred to as Monitors) for this Pact.

6.2 The task of the Monitors shall be to review independently and objectively, whether and to what extent the parties comply with the obligations under this Pact.

6.3 The Monitors shall not be subject to instructions by the representatives of the parties and perform their functions neutrally and independently.

6.4 Both the parties accept that the Monitors have the right to access all the documents relating to the project/procurement, for which a complaint or issue is raised before them, including minutes of meetings. The right to access records should only be limited to the extent absolutely necessary to investigate the issue related to the subject tender/contract.

6.5 As soon as the Monitor notices, or has reason to believe, a violation of this Pact, he will so inform CMD/CEO/MD of Employer and request Employer to discontinue or take corrective action, or to take other relevant action. The Monitor can in this regard submit non-binding recommendations. Beyond this the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.

6.6 The Bidder(s)/Contractor(s) accepts that the Monitor has the right to access without restriction, to all Project documentation of the Employer including that provided by the Bidder/Contractor. The Bidder/Contractor will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to Subcontractor(s). The Monitor shall be under contractual obligation to treat the information and documents of the Bidder/Contractor/Subcontractor(s) with confidentiality.

6.7 The Employer will provide to the Monitor sufficient information about all meetings among the parties related to the project provided such meetings could have an impact on the contractual relations between the parties. The parties will offer to the Monitor the option to participate in such meetings as and when required.

6.8 The Monitor will submit a written report to the CMD/CEO/MD of Employer within 10 days from the date of reference or intimation to him by the Employer/Bidder and should the occasion arise, submit proposals for correcting problematic situations.

6.9 The word 'Monitor' would include both singular and plural

7. FACILITATION OF INVESTIGATION

In case of any allegation of violation of any provisions of this Pact or payment of commission, the Employer or its agencies shall be entitled to examine all the documents including the Books of Accounts of the Bidder/Contractor and the Bidder/Contractor shall provide necessary information and documents in English and shall extend all possible help for the purpose of such examination.

8. LAW AND PLACE OF JURISDICTION

This Pact is subject to (Employer's Country) Law. The place of performance and jurisdiction is the Registered Office of the Employer. The arbitration clause provided in the tender document/contract shall not be applicable for any issue/dispute arising under Integrity Pact.

9. OTHER LEGAL ACTIONS

9.1 The actions stipulated in this Integrity Pact are without prejudice to any other legal action that may follow in accordance with the provisions of the extant law in force relating to any civil or criminal proceedings.

9.2 Changes and supplements as well as termination notice need to be made in writing.

9.3 If the Contractor is a partnership or a consortium or a joint venture, this pact must be signed by all partners of the consortium/joint venture.

10. VALIDITY

10.1 The validity of this Integrity Pact shall be from date of its signing and extend upto 7 years or the complete execution of the contract to the satisfaction of both the Employer and the Bidder/Contractor/Seller, including warranty period, whichever is later. In case BIDDER is unsuccessful, this Integrity Pact shall expire after six months from the date of the signing of the contract or six months from the date of opening of price bids, whichever is earlier.

10.2 Should one or several provisions of this Pact turn out to be invalid, the remainder of this Pact shall remain valid. In this case, the parties will strive to come to an agreement to their original intention.

11. The Parties hereby sign this Integrity Pact at_____on_____.

Employer	Bidder
	(Authorised Person)
(Name of Person)	(Name of Person)
(Designation)	(Designation)
Place:	Place:
Date:	Date:
Witness 1:	Witness 1:
Name & Address	Name & Address
Witness 2:	Witness 2:
Name & Address:	Name & Address:

Annex-A

GUIDELINES ON BANNING OF BUSINESS DEALINGS

S. No.	Description
1.0	Introduction
2.0	Scope
3.0	Definitions
4.0	Initiation of Banning/Suspension
5.0	Suspension of Business Dealings
6.0	Ground on which Banning of Business dealing can be initiated
7.0	Banning of Business dealings
8.0	Removal from List of Approved agencies-Suppliers/Contractors etc.
9.0	Show-cause Notice
10.0	Appeal against the Decision of the Competent Authority.
11.0	Circulation of the names of Agencies with whom Business Dealings havebeen banned.

Guidelines on Banning of Business Dealings

1. INTRODUCTION

1.0 Employer deals with Agencies viz. parties/ contractors/ suppliers/ bidders, who are expected toadopt ethics of highest standards and a very high degree of integrity, commitments and sincerity towards the work undertaken. It is not in the interest of Employer to deal with Agencies who commit deception, fraud or other misconduct in the tendering process.

1.1 Since banning of business dealings involves civil consequences for an Agency concerned, it is incumbent that adequate opportunity of hearing is provided and the explanation, if tendered, is considered before passing any order in this regard keeping in view the facts and circumstancesof the case.

2. SCOPE

2.1 The Information for Bidders/ Instruction to Bidders and even the General Conditions of Contract (GCC) of Employer generally provide that Employer shall have the rights to remove from list of approved suppliers / contractors or to ban business dealings if any Agency has been found to have committed misconduct or fraud or anything unethical not expected from a reputed contractor.

2.2 The procedure of (i) Removal of Agency from the List of approved suppliers / contractors; (ii) Suspension and (iii) Banning of Business Dealing with Agencies, has been laid down in these guidelines.

2.3 These guidelines shall apply to all the Projects/ Power Stations/ Regional Offices/ Liaison Offices of MAHAPREIT including its subsidiaries and JVs.

2.4 It is clarified that these guidelines do not deal with the poor performance of the contractors/ Agencies.

2.5 The banning shall be with prospective effect, i.e., future business dealings.

3. DEFINITIONS

3.1 In these Guidelines, unless the context otherwise requires:

i) **"Party / Contractor / Supplier / Bidders"** shall mean and include a public limited companyor a private limited company, a joint Venture, Consortium, HUF, a firm whether registered or not, an individual, cooperative society or an association or a group of persons engaged in any commerce, trade, industry, etc. "Party / Contractor/ Supplier / Bidder' in the context of these guidelines is indicated as 'Agency'.

ii) **"Unit"** shall mean the Project/ Power Station/ Regional Office/ Liaison Office.

iii) "**Competent Authority"** and '**Appellate Authority'** shall mean the following:
The concerned Director shall be the 'Competent Authority' for the purpose of these guidelines.
CMD shall be the 'Appellate Authority' in respect of such cases.

iv) **"Investigating Committee"** shall mean any Officer/Committee appointed by Competent Authority to conduct investigation.

v) **"List of approved Agencies viz Parties / Contractors / Suppliers/Bidders"** shall mean and include list of Parties/ Contractors / Suppliers / Bidders etc if registered with Employer.

4. INITIATION OF BANNING / SUSPENSION

Action for banning /suspension business dealings with any Agency shall be initiated by the department responsible for invitation of bids after noticing the irregularities or misconduct on the part of Agency concerned. Besides the concerned department, Vigilance Department of each Unit/ Corporate Vigilance may also be competent to initiate such action.

5. SUSPENSION OF BUSINESS DEALINGS.

5.1 If the conduct of any Agency dealing with Employer is under investigation, the Competent Authority may consider whether the allegations (under investigation) are of a serious nature and whether pending investigation, it would be advisable to continue business dealing with the Agency. If the Competent Authority, after consideration of the matter including the recommendation of the Investigating Committee, if any, decides that it would not be in the interest to continue business dealings pending investigation, it may suspend business dealingswith the Agency. The order of suspension would operate for a period not more than six monthsand may be communicated to the Agency as also to the Investigating Committee. The Investigating Committee may ensure that their

investigation is completed and whole process offinal order is over within such period. However, if investigations are not completed in six months'time, the Competent Authority may extend the period of suspension by another three months, during which period the investigations must be completed.

5.2 The order of suspension shall be communicated to all Departmental Heads of MAHAPREIT (including its subsidiaries and JVs) and Heads of the Units. During the period of suspension, no businessdealing may be held with the Agency.

5.3 As far as possible, the existing contract(s) with the Agency may continue unless the Competent Authority, having regard to the circumstances of the case, decides otherwise.

5.4 If the Agency concerned asks for detailed reasons of suspension, the Agency may be informedthat its conduct is under investigation. It is not necessary to enter into correspondence or argument with the Agency at this stage.

5.5 It is not necessary to give any show-cause notice or personal hearing to the Agency before issuing the order of suspension.

6. GROUND ON WHICH BANNING OF BUSINESS DEALINGS CAN BE INITIATED

6.1 If the security consideration, including questions of loyalty of the Agency to Employer so warrants;

6.2 If the director /owner of the Agency, proprietor or partner of the firm, is convicted by a Court of Law for offences involving moral turpitude in relation to its business dealings with the Government or any other public sector enterprises, during the last three years.

6.3 If business dealings with the Agency have been banned by the Department of Power, Government of India and the relevant government department of Employer's Country.

6.4 If the Agency has resorted to corrupt, fraudulent practices including misrepresentation of facts;

6.5 If the Agency uses intimidation / threatening or brings undue outside pressure on Employer or its official for acceptance / performances of the job under the contract;

6.6 If the Agency misuses the premises or facilities of Employer, forcefully occupies or damages Employer's properties including land, water resources, forests / trees or tampers with documents/records etc. (Note: The examples given above are only illustrative and not exhaustive. The Competent Authority may decide to ban business dealing for any good and sufficient reason).

7. BANNING OF BUSINESS DEALINGS

7.1 A decision to ban business dealings with any Agency shall apply throughout MAHAPREIT including its subsidiaries/JVs.

7.2 There will be an Investigating Committee consisting of officers not below the rank of AGM/DGM from Indenting Division, Finance, Law and Contracts. Member from department responsible for invitation of bids shall be the convener of the committee. The functions of the committee shall, inter-alia include:

i) To study the report of the unit/division responsible for invitation of bids and decide if a prima-facie case for banning exists, if not, send back the case to the Competent Authority.

ii) To recommend for issue of show-cause notice to the Agency by the concerned unit/divisionas per clause 9.1.

iii) To examine the reply to show-cause notice and call the Agency for personal hearing, if required.

iv) To submit final recommendations to the Competent Authority for banning or otherwise.

8. REMOVAL FROM LIST OF APPROVED AGENCIES - SUPPLIERS/ CONTRACTORS, ETC.

8.1 If the Competent Authority decides that the charge against the Agency is of a minor nature, it may issue a show-cause notice as to why the name of the Agency should not be removed fromthe list of approved Agencies - Suppliers / Contractors, etc.

8.2 The effect of such an order would be that the Agency would not be qualified for competing in Open Tender Enquiries or Limited Tender Enquiries till the period mentioned in the order.

8.3 Past performance of the Agency may be taken into account while processing approval of the Competent Authority for award of the contract.

9. SHOW-CAUSE NOTICE

9.1 In case where the Competent Authority decides that action against an Agency is called for, a show-cause notice has to be issued to the Agency, Statement containing the imputation of misconduct or

misbehavior may be appended to the show-cause notice and the Agency shouldbe asked to submit within 15 days a written statement in its defense.

9.2 If the Agency requests for inspection of any relevant document in possession of Employer, necessary facility for inspection of documents may be provided.

9.3 The Competent Authority may consider and pass an appropriate speaking order:

a) For exonerating the Agency if the charges are not established;
b) For removing the Agency from the list of approved Suppliers / Contactors, etc.
c) For banning the business dealing with the Agency.

9.4 If it decides to ban business dealings, the period for which the ban would be operative may be mentioned.

10. APPEAL AGAINST THE DECISION OF THE COMPETENT AUTHORITY

10.1 The Agency may file an appeal against the order of the Competent Authority banning business dealing etc. The appeal shall be filed to Appellate Authority. Such an appeal shall be preferred within one month from the date of receipt of the order banning business dealing, etc.

10.2 Appellate Authority would consider the appeal and pass appropriate order which shall be communicated to the Agency as well as the Competent Authority.

11. CIRCULATION OF THE NAMES OF AGENCIES WITH WHOM BUSINESS DEALINGS HAVE BEEN BANNED

i) The concerned unit shall forward the name and details of the Agency(ies) banned to IT&C Division of MAHAPREIT's Corporate Office for displaying the same on MAHAPREIT website.

ii) Corporate Contracts Department shall also forward the name and details of the Agency(ies)banned to the Ministry of Power, GoI besides forwarding the name and details to the con- tracts/procurement group of all CPSUs of power sector.

FORM OF DECLARATION OF ELIGIBILITY
UNDERTAKING

I / We, M/s .....(Name of Bidder) hereby certify that I / we have not been banned /de-listed/ black listed / debarred from business by any PSU / Govt. Department during last 03 (three) years on the grounds mentioned in para 6 of Guidelines on banning of Business dealing, ITB Clause of Tender Document.

(Seal & signature of the Bidder)

ATTACHMENT 5

PROFORMA FOR BLACKLISTING
UNDERTAKING

To
Chief General Manager (RESCO II) (Designation)
Mahatma Phule Renewable Energy & Infrastructure Technology Limited.
B-501 Pinnacle Corporate Park, Next to Trade Center,
BKC, Bandra (East), Mumbai – 400051

Subject: Tender for Land Development and Power Evacuation works with 33KW substation for 3 MW Solar Power Project on land at Kelapur, Taluka Wardha, District Wardha for **National Cancer Institute Nagpur,** which includes land cutting & filling, removal of shrubs, trees, bushes etc., & providing of internal roads and drainage with Power Evacuation & Transmission Infrastructure up to Inter Connection Point of STU.

Dear Sir,
I / We, M/ s..... (Name of Bidder) hereby certify that I / we have not been banned / de-listed / black listed / debarred from business by any PSU / Govt. Department during last 03 (three) years. I/We will immediately inform to Client (MAHAPREIT Limited) in case of any change in the situation any time hereinafter.

Yours sincerely,

Authorized Signature [*In full and initials*]:
Name and Title of Signatory:
Name of the Bidder:
Address:
Seal of the Bidder:_____

ATTACHMENT 6

NO DEVIATION CERTIFICATE

To
Chief General Manager (RESCO II) (Designation)
Mahatma Phule Renewable Energy & Infrastructure Technology Limited.
B-501 Pinnacle Corporate Park, Next to Trade Center,
BKC, Bandra (East), Mumbai – 400051

Subject: No Deviation Certificate regarding tender Land Development and Power Evacuation works with 33KW substation for 3 MW Solar Power Project on land at Kelapur, Taluka Wardha, District Wardha for **National Cancer Institute Nagpur,** which includes land cutting & filling, removal of shrubs, trees, bushes etc., & providing of internal roads and drainage with Power Evacuation & Transmission Infrastructure up to Inter Connection Point of STU.

Dear sir,

We, [Bidder's name], confirm our acceptance to all terms and conditions mentioned in the Bid Document Ref No _____including all subsequent clarifications/ amendment/addendum/corrigendum(s), in totality and withdraw all deviations raised by us, if any.

Yours sincerely,

Authorized Signature [*In full and initials*]:
Name and Title of Signatory:
Name of the Bidder:
Address:
Seal of the Bidder:_____

ATTACHMENT 7

PROFORMA FOR ELECTRONIC FUND TRANSFER (EFT)

To
Chief General Manager (RESCO II) (Designation)
Mahatma Phule Renewable Energy & Infrastructure Technology Limited.
B-501 Pinnacle Corporate Park, Next to Trade Center,
BKC, Bandra (East), Mumbai – 400051

Ref: Authorization for payments through Electronic Fund Transfer System.

Dear Sir,

We, hereby authorize MAHAPREIT (Complete address of the Unit with Postal Code) to make all payments due to us through Electronic Fund Transfer System. The details for facilitating the payments are given below:

(TO BE FILLED IN CAPITAL LETTER)

1. NAME OF THE BENEFICIARY

2. ADDRESS

3. TELEPHONE NO (WITH STD CODE)

4. FAX NO. (WITH STD CODE)

5. BANK PARTICULARS:

A) BANK NAME

B) BANK TELEPHONE NO. (WITH STD CODE):

C) BRANCH ADDRESS (WITH BRANCH CODE)

D) BANK FAX NO. (WITH STD CODE)

E) 9 DIGIT MICR CODE OF THE BANK BRANCH (ENCLOSE COPY OF A CANCELLED

CHEQUE):

F) RTGS CODE OF THE BANK

G) BANK ACCOUNT NUMBER

H) BANK ACCOUNT TYPE (TICK ONE):

SAVING	CURRENT	LOAN	CASH CREDIT	OTHERS

IF OTHERS, SPECIFY

6. PERMANENT ACCOUNT NUMBER (PAN)

7. E-MAIL ADDRESS FOR INTIMATION REGARDING RELEASE OF PAYMENTS

It is certified that the particulars given above are correct and complete. If the transaction is delayed or credit is not effected at all for reasons of incomplete or incorrect information, I/ wewould not hold the Company responsible.

SIGNATURE

Date:

(AUTHORISED SIGNATORY)

NAME:

OFFICIAL STAMP

BANK CERTIFICATION

It is certified that above mentioned beneficiary hold a Bank Account No with our branch and the Bank particulars mentioned above are correct.

SIGNATURE

Date:

(AUTHORISED SIGNATORY OF THE BANK)

Authorization No.....

NAME:

OFFICIAL STAMP

Seal of the Bidder:_____

Place:

Date:

ATTACHMENT 8

TECHNICAL DATA OF THE BIDDER

To
Chief General Manager (REECO) (Designation)
Mahatma Phule Renewable Energy & Infrastructure Technology Limited.
B-501 Pinnacle Corporate Park, Next to Trade Center,
BKC, Bandra (East), Mumbai – 400051

Subject: Tender for Land Development and Power Evacuation works with 33KW substation for 3 MW Solar Power Project on land at Kelapur, Taluka Wardha, District Wardha for **National Cancer Institute Nagpur,** which includes land cutting & filling, removal of shrubs, trees, bushes etc., & providing of internal roads and drainage with Power Evacuation & Transmission Infrastructure up to Inter Connection Point of STU.

Dear sir,

i. In support of Qualifying Requirements of Clause 1.2.1 of Bid Document, we confirm that we have successful experience in executing at least one Transmission Line of 33 KV or above voltage class of minimum 2 km length completed in last 7 (Seven) years ending last day of month previous to the one in which NIT is issued. Such Transmission line should be in successful operation for a period of at least 01 year ending last day of month previous to the one in which NIT is issued.

ii. Details are as below :-

S.N.	Item Description	Reference Project
1.	Description of work	
2.	Name of Client with full address, Fax No. & Tel. No.	
3.	Name of the Sub-Station with its location	
4.	Name and designation of the responsibleperson in client's organization	
5.	Contract No. and Date	
6	Erection , Commissioning and operation of Transmission Line of 33 KV or above voltage.	
7.	Voltage level of Electrical Substation	
8.	Electrical Sub Station consisting of equipments of 33 KV or above: (a) Circuit Breaker (b) Power Transformers	 YES*☐ / NO*☐ YES*☐ / NO*☐
9.	Whether the Electrical Sub Station has been executed as: (a) Developer (b) EPC Contractor	 YES*☐ / NO*☐ YES*☐ / NO*☐
10.	Date of Commissioning of the Sub-Station	
11.	Date of Start of Operation of the above sub-station	

**Strike off whichever is not applicable*

Note:

1. *Bidder shall submit documentary evidence i.e. Copies of authen purchase orders/LOA,Agreements, Certificate from Clients in support of details/data of Sl. No. 1 to 10 above.*
2. *Bidder may furnish additional reference plant which have been in operation for at least three (03)months prior to the date of NIT.*
3. *Continuation sheets of like size and format may be used and annexed to this Attachment if required*

iii. In support of Qualifying Requirements of Clause 1.2.1(b) & (c) of Bid Document, we confirm that we have experience in civil & associated works in development of Solar Park /Solar Project / Wind Parks with any Govt. Organization or Reputed Private Organization and executed work order of minimum of Rs 1 Cs and cumulative of Rs 10 Crs during last 7 (Seven) years.
Details of works are as under:

Sl. No.	**Item Description**	**Reference Project**
1.	Description of work	
2.	Name of Client with full address, Fax No. & Tel. No.	
3.	Name of the project with its location	
4.	Name and designation of the responsibleperson in client's organization	
5.	Contract No. and Date	
6.	Cost of the civil works executed in Solar Project/ Wind Project. (in crore)	

**Strike off whichever is not applicable*

Note:

1. *Bidder shall submit documentary evidence i.e., Copies of authentic purchase orders/LOA,Agreements, Certificate from Clients in support of details/data of Sl. No. 1 to 6 above.*
2. *Continuation sheets of like size and format may be used and annexed to this Attachment if required*

Appendix 1 to Attachment 8

Bidder shall enclose Certificate of Incorporation along with the Bid

Appendix 2 to Attachment 8

DETAILS OF THE FIRM

The details of Group company/ Holding company/ subsidiary company of the Bidder is as under:

Sl No.	Description of the Group company/ Holding company/ Subsidiary company of the Bidder	Information
1.	Name of the company	
2.	Please specify whether, Group company/Holding company/ Subsidiary company	
3.	Full Address of the company	
4.	Telephone No.	

Appendix 3 to Attachment 8

FORM OF UNDERTAKING BY BIDDER AND THE FIRM

Joint undertaking between Indian bidder and the firm (who qualify under requirements of clauses), for Land Development and Power Evacuation works with 33KW switch yard at **National Cancer Institute Nagpur** for the capacity **3 MW** which includes land cutting & filling, removal of shrubs, trees, bushes etc., & providing of internal roads and drainage with Power Evacuation & Transmission Infrastructure up to Inter Connection Point of STU for setting up Solar Project(s) in the State of Maharashtra**. in which the firm and the bidder are jointly and severally liable to the Employer for the completeperformance of contract in case of award.**

We, M/s ..... a Company incorporated under the ..... having its Registered Office at ..... (The Firm) and M/s a company incorporated under the ..... having its registered office at (The Bidder) jointly undertake the following on ..... day of ..... for the ... to Mahatma Phule Renewable Energy & Infrastructure Technology Limited, company incorporated under the Companies Act, 2013, having its Registered Office at Corporate Headquarter, B-501 Pinnacle Corporate Park, Next to Trade Center, BKC, Bandra (East), Mumbai – 400051 (M.H.).

Mahatma Phule Renewable Energy & Infrastructure Technology Limited (Employer) has invited bids for ...vide its Bid Document No. .....for **(Name of Bidder)** M/s. ..... (Bidder) is submitting its proposal in response to the aforesaid Bidding Document No. ...for development of grid connected Solar PV project(s) of capacity against the bid document no.....

1. In case of the Award of the Contract by the Employer to the Bidder, we the Bidder and the Firm undertake that we shall be jointly and severally responsible to the Employer for the complete performance of Contract.
2. In case of any breach of the Contract (in case of award) committed by the Bidder, we the Firm undertake and confirm that we shall be fully responsible for the complete performance of Contract(in case of award) and undertake to carry out all the obligations and responsibilities under this joint Undertaking in order to discharge the Bidder's obligation and responsibilities as stipulated in the contract.
3. The Bidder and the Firm will be fully responsible for the quality of all the equipment manufactured at their works or at their vendor works or construction at site, and their repair or replacement, if necessary and timely delivery to meet the completion schedule under the Contract (in case of award).
4. We, the Bidder the Firm agree that this undertaking shall be irrevocable and shall form an integralpart of the Contract. We further agree that this undertaking shall continue to be enforceable till the successful completion of Contract and till the Employer discharge it.
5. The Joint Undertaking shall be operative from the effective date of the Contract until ninety (90) days beyond the Defect Liability Period.

For M/s .....
(The Firm)
(Signature of the authorized representative)
Name .....
Designation .....
Common Seal of the Company

For M/s .....
(The Employer)
(Signature of the authorized representative)
Name .....
Designation .....
Common Seal of the Company
.....

Note: Power of Attorney of the Persons Signing on behalf of the Firm and Bidder is to be furnished by the Bidder and to be attached with this signed Joint Undertaking.

ATTACHMENT 9

FINANCIAL DATA OF THE BIDDER

To
Chief General Manager (RESCO II) (Designation)
Mahatma Phule Renewable Energy & Infrastructure Technology Limited.
B-501 Pinnacle Corporate Park, Next to Trade Center,
BKC, Bandra (East), Mumbai – 400051

Subject: Tender for Land Development and Power Evacuation works with 33KW substation for 3 MW Solar Power Project on land at Kelapur, Taluka Wardha, District Wardha for National Cancer Institute Nagpur, which includes land cutting & filling, removal of shrubs, trees, bushes etc., & providing of internal roads and drainage with Power Evacuation & Transmission Infrastructure up to Inter Connection Point of STU. **(Financial Data pertaining to Financial Qualification of the Bidder as per Clause 1.2.2 of NIT)**

Dear Sirs,

A. In support of Qualifying Requirements of Clause 1.2.2 of Bid Document, we confirm that our average annual turnover for preceding three (3) financial years as on date of NIT is not less than_____. In support of above, we are enclosing Audited Financial Statements. The detail of our annual turnover for the preceding three (3) financial years are as under:

Sl. NO.	Financial Year	Amount in Rupees (in Lakh)
1.	2022-23	
2.	2023-24	
3.	2024-25	
4.	Average Annual Turnover for the above three (3) Financial Years	INR .....

Note:

1. *Bidder shall submit Audited Financial Statements and certificate from the Statutory Auditor / Chartered Accountant for preceding three (3) Financial Years as on date of NIT.*
2. *In case where audited results for the last financial year as on the date of NIT are not available, certification of financial results certified by practicing chartered accountant shall also be considered acceptable.*
3. *For the purposes of meeting financial requirements, only unconsolidated audited annual accounts shall be used. However, audited consolidated annual accounts of the Bidder may be used for the purpose of financial requirements provided the Bidder has at least twenty six percent (26%) equity in each company whose accounts are merged in the audited consolidated accounts*

B. **For bidders not meeting the requirement of Clause 1.2.2.1 of NIT on its own**

Since we do not satisfy the Financial Criteria stipulated at Clause 1.2.2.1 of NIT, On its Own, we give below the following details of our Holding Company In terms of Clause 1.2.2.1 of NIT who meet the stipulated turnover requirements and whose Net worth as on the last day of the preceding financial year is at least equal to or more than the paid-up share capital of the Holding Company.

1. Name and Address of the Holding Company: .....
2. Annual Turnover of the Holding Company with following details:

Sl. NO.	Financial Year	Amount in Rupees (in Lakh)
1.	2022-23	
2.	2023-24	
3.	2024-25	

4.	Average Annual Turnover for the above three (3) Financial Years	INR .....

**Please Strike off whichever is not applicable.*

Note:

1. *Bidder shall submit Audited Financial Statements and certificate from the Statutory Auditor / Chartered Accountant for preceding three (3) Financial Years of the Holding Company as on date of NIT.*
2. *Bidder shall also submit a Letter of Undertaking from the Holding Company, supported by the Holding Company's Board Resolution, as per the format enclosed in **Appendix 1 to Attachment 9** of the bid documents, pledging unconditional and irrevocable financial support for the execution of the Contract by the Bidder in case of award.*

Place	*Name*
Date	*Designation*

C. In support of Qualifying Requirements of Clause 1.2.2.2 of Bid Document, we hereby confirm that net worth of our company is as under:

Sl. No.	**Financial Year**	**Amount in Rupees (in Lakh)**	**Positive/Negative**
1.	2022-23		
2.	2023-24		
3.	2024-25		

Note:

1. *Documentary evidence like Annual Report/ Audited financial statements for the preceding three (03) Financial years/ in case Audited results for the preceding Financial Year is not available, certification of financial statements from a practicing Chartered Accountant etc. in support of above.*
2. *For the purposes of meeting financial requirements, only unconsolidated audited annual accounts shall be used. However, audited consolidated annual accounts of the Bidder ma be used for the purpose of financial requirements provided the Bidder has at least twenty sixpercent (26%) equity in each company whose accounts are merged in the audited consolidated accounts*

.

D. We hereby confirm that working capital for last financial year of our company is as under:

Sl. No.	**Financial Year**	**Amount in Rupees (in Lakh)**
1.	Current Assets (CA)	
2.	Current Liabilities (CL)	
3.	Working Capital (CA-CL)	

Note: Bidder shall also submit banking reference from Scheduled Bank in India in support of working capital and it should not be more than 03 months old as on the last date of submission of bid. Above Banking reference(s) should contain in clear terms the amount that the Bank will be in a position to lend for this work to the bidder. In case the Net Working Capital (as seen from the Balance Sheet) is negative, only the Banking reference(s) will be considered, otherwise the aggregate of the Net Working Capital and submitted Banking reference(s) will be considered for working out the working capital. The banking reference, if any shall be attached as Appendix-2 to Attachment-9.

Place *Name*

Date *Designation*

Appendix 1 to Attachment 9

(To be executed on Letterhead of the Holding Company)

To
Chief General Manager (RESCO II) (Designation)
Mahatma Phule Renewable Energy & Infrastructure Technology Limited.
B-501 Pinnacle Corporate Park, Next to Trade Center,
BKC, Bandra (East), Mumbai – 400051

Dear Sir(s)

1. We, M/s..... [Insert name of Holding Company] declare that we are the holding company of M/s ..... [Insert name of Bidder] and have controlling interest therein. M/s. ..... [Insert name of Bidder] ..... proposes to submit the Bid for Package..... [Insert name of the package] having reference no. ..... and have sought financial strength and support from us for meeting the stipulated Financial Qualifying Requirement as per Clause No. 1.2 [Eligibility Criteria].
2. We hereby undertake that we hereby pledge our unconditional & irrevocable financial support for the execution of the contract for ..... to M/s. ..... [Insert name of Bidder] in case of award. We further agree that this undertaking shall be without prejudice to the all-contractual liabilities that M/s ..... [Insert name of Bidder] ..... would be required to undertake in terms of the Contract including the CPSG as well as other obligations of the Bidder/Contractor.
3. This undertaking is irrevocable and unconditional, and shall remain in force till completion of the Contract.
4. We are herewith enclosing a copy of the Board Resolution in support of this Undertaking.

Place
Date

Authorized Signature [*In full and initials*]:
Name and Title of Signatory:
Name of the Bidder:
Address:
Seal of the Bidder:_____

(Bidder shall submit banking reference, if any in support of Working capital in this attachment)

ATTACHMENT 10

FORMAT FOR SUBMISSION OF TIME SCHEDULE

To
Chief General Manager (RESCO II) (Designation)
Mahatma Phule Renewable Energy & Infrastructure Technology Limited.
B-501 Pinnacle Corporate Park, Next to Trade Center,
BKC, Bandra (East), Mumbai – 400051

Subject: Tender for Land Development and Power Evacuation works with 33KW substation for 3 MW Solar Power Project on land at Kelapur, Taluka Wardha, District Wardha for National Cancer Institute Nagpur, which includes land cutting & filling, removal of shrubs, trees, bushes etc., & providing of internal roads and drainage with Power Evacuation & Transmission Infrastructure up to Inter Connection Point of STU.

Dear sir,

We hereby confirm the acceptance to the time schedule (.....) month for completion of Facilities) as specified in the Bid Document. Further, we are submitting the detailed activity wise Time schedule (L1 Schedule) in the form of PERT Chart covering all aspects like ordering, site preparation, Supply, erection, installation, testing & commissioning, etc. for Power Evacuation and Transmission System and Civil Works along with the bid.

Place
Date

Authorized Signature [*In full and initials*]:
Name and Title of Signatory:
Name of the Bidder:
Address:
Seal of the Bidder:_____

ATTACHMENT 11

FORMAT FOR LIST OF SUB-CONTRACTORS /VENDORS PROPOSED TO BE ENGAGED

To
Chief General Manager (RESCO II) (Designation)
Mahatma Phule Renewable Energy & Infrastructure Technology Limited.
B-501 Pinnacle Corporate Park, Next to Trade Center,
BKC, Bandra (East), Mumbai – 400051.

Subject: Tender for Land Development and Power Evacuation works with 33KW substation for 3 MW Solar Power Project on land at Kelapur, Taluka Wardha, District Wardha for National Cancer Institute Nagpur, which includes land cutting & filling, removal of shrubs, trees, bushes etc., & providing of internal roads and drainage with Power Evacuation & Transmission Infrastructure up to Inter Connection Point of STU.

Sl. No.	**Name of the equipment/system**	**Make Proposed by theBidder**	**Source of Material (Name of Country)**
1			
2			
3			
4			
5			
6			
7			
8			
9			

Place
Date

Authorized Signature [*In full and initials*]:
Name and Title of Signatory:
Name of the Bidder:
Address:
Seal of the Bidder:_____

ATTACHMENT 12

PERFORMA FOR MANDATORY INFORMATION REQUIRED TO UPLOAD THE AWARD DETAILS ON CENTRAL PROCUREMENT PORTAL (CPP) i.e., HTTPS://EPROCURE.GOV.IN/CPPP ENGAGED

To
Chief General Manager (RESCO II) (Designation)
Mahatma Phule Renewable Energy & Infrastructure Technology Limited.
B-501 Pinnacle Corporate Park, Next to Trade Center,
BKC, Bandra (East), Mumbai – 400051

Subject: *Tender for Land Development and Power Evacuation works with 33KW substation for 3 MW Solar Power Project on land at Kelapur, Taluka Wardha, District Wardha for National Cancer Institute Nagpur, which includes land cutting & filling, removal of shrubs, trees, bushes etc., & providing of internal roads and drainage with Power Evacuation & Transmission Infrastructure up to Inter Connection Point of STU.*

1.	Company Name	
2.	Registration Number	
3.	Registered Address	
4.	Name of Partners/ Directors	
5.	Bidder Type : Indian/ Foreign	
6.	City	
7.	Postal Code	
8.	Company's GST number	
9.	Bank details for payment (including IFSC no.)	

10. Company's Legal Status (Tick ☐)

Limited Company
Joint Venture
Partnership
Undertaking
Others

11. Company Category (Tick ☐)

Micro Unit as per MSME
Small Unit as per MSME
Medium Unit as per MSME
Ancillary Unit
Project Affected Person of this Company
SSI
Others

Contact Details:
Enter Company ContactPerson Details

Title (Tick ☐)

Mrs.	Mr.	Ms.	Dr.	Shri

Contact Name	
Date of Birth (DD/MM/YYYY)	
Correspondence Email	
Designation	
Phone Details e.g: +91 044 22272449	+91
Mobile Number	

I, the undersigned, Proprietor/Director/authorized signatory of [*Insert name of the Firm/Agency/Bidder*] do hereby solemnly declare and affirm that the details furnished above are true and correct to the best of my knowledge and belief.

Place
Date

Authorized Signature [*In full and initials*]:
Name and Title of Signatory:
Name of the Bidder:
Address:
Seal of the Bidder:_____

ATTACHMENT 13

UNDERTAKING FOR CONTRACT

(In compliance of Ministry of Finance, Government of India order no F. No. 6/18/2019-PPD dated 23.07.2020)

I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India. I certify that (name of Bidder) is not from such a country or, if from such a country, has been registered with the Competent Authority. I hereby certify that ..... (name of Bidder) fulfills all requirements in this regard and is eligible to be considered.

Note:- Evidence of valid registration by the Competent Authority shall be attached (if applicable)

Place
Date

Authorized Signature [*In full and initials*]:
Name and Title of Signatory:
Name of the Bidder:
Address:
Seal of the Bidder:_____

ATTACHMENT 14
Deleted

ATTACHMENT 15

ESTIMATED BILL OF MATERIAL

To
Chief General Manager (RESCO II) (Designation)
Mahatma Phule Renewable Energy & Infrastructure Technology Limited.
B-501 Pinnacle Corporate Park, Next to Trade Center,
BKC, Bandra (East), Mumbai – 400051

Subject: Tender for Land Development and Power Evacuation works with 33KW substation for 3 MW Solar Power Project on land at Kelapur, Taluka Wardha, District Wardha for **National Cancer Institute Nagpur,** which includes land cutting & filling, removal of shrubs, trees, bushes etc., & providing of internal roads and drainage with Power Evacuation & Transmission Infrastructure up to Inter Connection Point of STU.

Dear Sir,
Estimated Bill of Quantity for *Land Development and Power Evacuation works which includes land cutting & filling, removal of shrubs, trees, bushes etc., & providing of internal roads & chain link fencing with Power Evacuation & Transmission Infrastructure up to Inter connection Point of STU & obtaining connectivity with STU for setting up Solar Project(s) in the State of Maharashtra***.** (Bidder is expected to provide detailed Bill of Quantity) [BoQ attached along with the Tender Document).
BOQ – POWER EVACUATION & SITE DEVELOPMENT WORKS (FOR BIDDERS)
PART–A: 33 kV POWER EVACUATION WORKS

Sr.	***Item Description***	***Technical Specification***	***Unit***	***Qty***	***Rate (₹)***	***Amount (₹)***
1	***33 kV Feeder Bay with Gantry & PT***	*36 kV, outdoor bay complete with gantry structure, PT, foundations, earthing & commissioning*	*Set*	*1*		
2	***33 kV S/C Overhead Line with AAAC***	*100 mm² AAAC conductor on 11 m RSJ poles including insulators, cross-arms, stays, earthing, stringing & testing*	*Km*	*10*		
3	***33 kV 3C × 300 mm² XLPE Underground Cable***	*36 kV grade, railway/road crossing including trenching, sand, tiles, laying, jointing, terminations & route markers*	*Km*	*1*		
4	***Double Pole Cut-Point Structure***	*11 m RSJ poles with complete fittings, insulators, stays & earthing*	*Nos*	*5*		
5	***Single Pole Cut-Point Structure***	*11 m RSJ pole with fittings, insulators, stays & earthing*	*Nos*	*25*		
6	***Material Handling, CST, Supervision & Normative Charges***	*As per DISCOM norms*	*L.S*	*1*		
7	***33 kV Cable Termination at Solar HT Panel***	*36 kV grade, suitable for 3C × 300 mm² XLPE cable, outdoor termination kit with glands & stress cones*	*Set*	*1*		
8	***33 kV Line Isolator with Earth Switch (Plant Side)***	*36 kV, 630 A, 25 kA, 3-pole, with mounting structure*	*Set*	*1*		
9	***Lightning Arresters (Plant Side)***	*33 kV, 10 kA, polymer type*	*Nos*	*3*		
10	***Structure Foundation & Earthing for Isolator & LA***	*RCC foundation, GI strip, 2 earth pits & interconnection*	*L.S*	*1*		
11	***33 kV Cable Termination at Solar HT Panel (if required)***	36 kV grade, suitable for **3C × 300 mm² XLPE cable**, outdoor termination kit with glands & stress cones	Set	1		

12	***33 kV Line Isolator with Earth Switch (Plant Side) (if required)***	36 kV, 630 A, 25 kA, 3-pole with mounting structure	Set	1		
13	***Lightning Arresters (Plant Side) (if required)***	33 kV, 10 kA, polymer type	Nos	3		
14	***Structure Foundation & Earthing for Isolator & LA (if required)***	RCC foundation, GI strip, 2 earth pits & interconnection	Lot	1		

Note: Quantity indicated against each item is tentative bidder to visit the site and assess the exact quantity before submission of bid.

PART–B: SITE DEVELOPMENT & INFRASTRUCTURE WORKS

Item No	***Description***	***Unit***	***Qty***	***Rate (₹)***	***Amount (₹)***
1	***Civil Works consisting of Land Development includes land cutting & filling, removal of shrubs, trees, bushes etc,***	*Per Ht.*	*3.16*		
2	***Chain link fencing along with gates (main and small)***	*Rmt*	*1100*		
3	***Security Cabin (10ft × 10 ft) – Prefab Type***	*Nos*	*1*		
4	***4 m Wide Murum Road***	*Rmt*	*495*		
5	***Drainage system 500x500 CM***	*Rmt*	*990*		

Note: Quantity indicated against each item is tentative bidder to visit the site and assess the exact quantity before submission of bid.

All rates shall be inclusive of:

- *Supply, installation, testing & commissioning*
- *Labour, tools, plant, transportation*
- *All taxes, royalties, GST, duties, insurance*
- *Safety & statutory compliances*

DISCOM approvals & shutdown coordination *shall be bidder's responsibility where required.*

All works shall conform to:

- *IS / IEC Standards*
- *MSEDCL / DISCOM technical specification*

NOTE: 1. The quoted Solar Modules and Cells to be used in the project shall be sourced only from the Modules and Manufacturers included in the latest "Approved List of Module and Manufacturers" as published by Ministry of New and Renewable Energy (MNRE). The Copy of latest published list shall be submitted with the bid.

1. The above quantities are tentative. The actual quantity shall be finalized during detail engineering.

Place
Date

Authorized Signature [*In full and initials*]:
Name and Title of Signatory:
Name of the Bidder:
Address:
Seal of the Bidder:_____

ATTACHMENT 16

FORMAT FOR TOOLS & TACKLES

To
Chief General Manager (RESCO II) (Designation)
Mahatma Phule Renewable Energy & Infrastructure Technology Limited.
B-501 Pinnacle Corporate Park, Next to Trade Center,
BKC, Bandra (East), Mumbai – 400051

Subject: Tender for Land Development and Power Evacuation works with 33KW substation for 3 MW Solar Power Project on land at Kelapur, Taluka Wardha, District Wardha for **National Cancer Institute Nagpur,** which includes land cutting & filling, removal of shrubs, trees, bushes etc., & providing of internal roads and drainage with Power Evacuation & Transmission Infrastructure up to Inter Connection Point of STU.

Following are the details of Tools & Tackles for *Land Development and Power Evacuation works which includes land cutting & filling, removal of shrubs, trees, bushes etc., & providing of internal roads & chain link fencing with Power Evacuation & Transmission Infrastructure up to Inter connection Point of STU & obtaining connectivity with STU for setting up Solar Project(s) in the State of Maharashtra***.**

Sl. No.	**Description of Tools**	**Quantity (Nos.)**

Place
Date

Authorized Signature [*In full and initials*]:
Name and Title of Signatory:
Name of the Bidder:
Address:
Seal of the Bidder:_____

ATTACHMENT 17
Deleted

PRICE BID FORMAT

(To be submitted in the Price bid envelop only)

Attachment – 18

Price Schedule (Price Bid)
(To be submitted in the Price bid envelop only)

Subject: - Tender for Land Development and Power Evacuation works with 33KW substation for 3 MW Solar Power Project on land at Kelapur, Taluka Wardha, District Wardha for **National Cancer Institute Nagpur,** which includes land cutting & filling, removal of shrubs, trees, bushes etc., & providing of internal roads and drainage with Power Evacuation & Transmission Infrastructure up to Inter Connection Point of STU.

.

Tender No:- MAHAPREIT/RESCO-01-25-26

Sr. No.	Scope of work	Rate Quated
1.	Civil works consist of following works :-	
A1	Land Development includes land cutting & filling, removal of shrubs, trees, bushes etc, Providing of internal roads & drainages , including security cabin. Providing of Chain link fencing.	-------- Rs / MW (In words) -------- Rs / MW (In Figures)
2	Power Evacuation & Transmission Infrastructure up to Inter connection Point of STU & obtaining connectivity with STU	
B1	Erection, Commissioning & Testing of 33 KV Power Transmission Lines including materials like Poles, Transmission lines, Civil foundations etc.	-------- Rs / Km (In words) -------- Rs / Km (In Figures)
B2	Construction of 33 KV Pooling stations in Solar Park / Solar Project with complete equipment & materials like CT, PT, Isolators, Gantry, Other Allied Materials, Civil Foundations etc. Similarly equipment / materials Like CT, PT, Isolators, Gantry, Other Allied Materials, Civil Foundations etc. required for interconnection & bay construction at Sub station end.	-------- Rs / MW (In words) -------- Rs / MW (In Figures)

Bidder's quote will be calculated considering following formula.

i. 60 % weightage will be given to the Work of Power Evacuation and Transmission System.
ii. 40% weightage will be given to the Civil Works consisting of land development, internal roads, drainage , Chain link fencing etc.
iii. Under the Power Evacuation & Transmission System , 25 % weightage will be given to Transmission Lines (25 % for 33 KV) and 75 % Weightage will be given to 33 KV Pooling Station and Bay at Sub station End.
iv. Bidder's Quote Z = (40 % A1) + (60 % of C1)

Where C1 = (25 % B1 + 75% B2)

2. Applicable Goods and Service Tax:- (inclusive / Exclusive) _____
Percentage of GST_____
3. Lowest Quote will be calculated considering bidder's quote calculated as above plus applicable GST.

Date :-_____

Signature of the Bidder_____

Seal of the Bidder _____

Name of the bidder_____

ANNEXURES

ANNEXURE 1

FORMAT OF CONTRACT AGREEMENT

This Contract Agreement (hereinafter called the "CONTRACT") is made, on the [*Insert day*] day of [*Insert month*] in the year [*Insert year*] at [*Insert place*].

BETWEEN

Mahatma Phule Renewable Energy & Infrastructure Technology Limited (hereinafter referred to as "MAHAPREIT", which expression shall, unless repugnant to the context or meaning thereof, be deemed to include its successors and assigns), a Company incorporated under the Companies Act 1956, having its registered office at B-501 Pinnacle Corporate Park, Next to Trade Center, BKC, Bandra (East), Mumbai – 400051 (hereinafter referred to as "MAHAPREIT", which expression shall, unless repugnant to the context or meaning thereof, be deemed to include its successors and assigns) of the one part.

AND

[*Insert name of the Contractor*] a Company incorporated under the Companies Act 1956/Companies Act 2013, having its registered office at [*insert address of the registered office of the contractor*] (hereinafter referred to as the "CONTRACTOR", which expression shall, unless repugnant to the context or meaning thereof, be deemed to include its successors and assigns) of the other part

WHEREAS the aforesaid MAHAPREIT has invited Notice Inviting Tender (NIT) for [*Insert Title of Tender*] videBid Document No. [*Insert Bid Document No. and date*] and the aforesaid CONTRACTOR had participated in the above referred Tender vide their Bid dated [*Insert the reference no. and date of thebids of the contractor*] and MAHAPREIT has accepted their aforesaid Tender and awarded the CONTRACT for [*Insert scope of the works for this contract*] on the terms and conditions contained in MAHAPREIT's Letterof Award No. ....[*Insert Letter of Award No.*]..... dated ..... [*Insert Date of Letter of Award No*]..... and the documents referred to therein, which have been unequivocally and unconditionally accepted by CONTRACTOR vide their acceptance dated [*Insert reference of acknowledgment and its date*] to this Letter of Award resulting into this CONTRACT hereinafter called [*Insert name of this Contract*]

AND WHEREAS THE CONTRACTOR has agreed to execute the aforesaid work for the sum of [*Insertvalue of the Contract*] ([*Insert value of the Contract in words*] upon the terms and subject to the conditions herein mentioned in this CONTRACT.

NOW THEREFORE the CONTRACTOR and MAHAPREIT hereby undertake and agree as follows:

1. **The following Documents attached hereto shall be deemed to form an integral part of THE CONTRACT:**
   - i. Contract Agreement
   - ii. MAHAPREIT's Letter of Award (LoA), duly accepted by you together with its amendments, if any.
   - iii. Bid Document including subsequent amendments/clarifications, if any.
   - iv. Your Bid Proposal along with Bid Response Sheets, Annexure, etc.
   - v. Final/Approved Quality Assurance Plans for manufacturing and site/field activities for all major/critical items.
   - vi. Integrity Pact
   - vii. Activity Chart/Project Schedule
   - viii. Manpower Chart
   - ix. Any other document forming part of the Contract
2. The mutual rights and obligations of the MAHAPREIT and the CONTRACTOR shall be as set forthin the CONTRACT, in particular:
   - **i)** THE CONTRACTOR shall do and perform all works and things in this contract mentioned and described or which are implied therein or there from respectively or arereasonably necessary for the completion of the works as mentioned and at the times, in the manner and subject to the terms & conditions and stipulations contained in this CONTRACT, and in consideration of the due provision, executions, construction and completion of the works agreed to by the CONTRACTOR.
   - **ii)** THE MAHAPREIT doth hereby covenant with the CONTRACTOR to pay all the sums of money as and when they become due and payable to THE CONTRACTOR under the provisions of the CONTRACT. Such payment to be made at such times and in such manner as laid down in the CONTRACT.
   - **iii)** The conditions and covenants stipulated herein before in this CONTRACT are subject to and without prejudice to the rights of the MAHAPREIT to enforce Liquidated Damages for delays and / or any other rights whatsoever including the right to reject and cancel on default or breach by the CONTRACTOR

of the conditions and the covenants as stipulated in the general conditions, specifications, forms, drawing, etc., attached with this CONTRACT.

iv) The contract value, extent of supply delivery dates, specifications, and other relevant matters may be altered by mutual agreement and if so altered shall not be deemed or construed to mean or apply to affect or alter other terms and conditions of the contract and the general conditions and the contract so altered or revised shall be and shall always be deemed to have been subject to and without prejudice to said stipulation.

3. MAHAPREIT has also enter into the following Contracts with the Contractor:
   a. ....
   b. .....

   A breach in the performance of any of the Contracts as indicated herein above including this Contract shall be considered as a breach in performance of the other Contracts, which shall confera right to the MAHAPREIT to terminate the other Contracts also at the risk and cost of the Contractor without prejudice to other rights, the MAHAPREIT may have as per terms & conditions of respective Contract
4. The effective date of this CONTRACT shall be reckoned from [Insert Date of commencement of the contract]

IN WITNESS WHEREOF, the Parties hereto have caused this Contract to be signed in their respective names as of the day, month and year first above written.

For and behalf of MAHAPREIT	For and behalf of M/s_____
Signature	Signature
Name & Address	Name & Address
Designation	Designation
Witness 1	Witness 1
Name & Address	Name & Address
Witness 2	Witness 2
Name & Address	Name & Address

ANNEXURE 2

PROFORMA FOR BANK GUARANTEE FOR CONTRACT PERFORMANCE CUM SECURITY GUARANTEE (IN ACCORDANCE WITH CLAUSE NO 3.46.1)

(To be stamped in accordance with Stamp Act)

Bank Guarantee No. .....

Date .....

To

Chief General Manager (RESCO II) (Designation)

Mahatma Phule Renewable Energy & Infrastructure Technology Limited.

B-501 Pinnacle Corporate Park, Next to Trade Center,

BKC, Bandra (East), Mumbai – 400051

Dear Sir,

In consideration of the ..... [Employer's Name]..... (hereinafter referred to as the 'Employer,' which expression shall unless repugnant to the context or meaning thereof, include its successors, administrators and assigns) having awarded to M/s [Contractor's Name] ..... with its Registered/Head Office at (hereinafter referred to as the 'Contractor', which expression shall unless repugnant to the context or meaning thereof, include its successors administrators, executors and assigns), a Contract by issue of Employer's Letter of Award No. ..... dated ..... and the same having been unequivocally accepted by the Contractor, resulting into a contract bearing No dated.....valued at ..... for ..... and the Contractor having agreed to provide a Contract Performance cum Security Guarantee for the faithful performance of the entire Contract equivalent to ..... (*) ..... % (percent) of the said value of the Contract to the Employer.

We ..... [Name & Address of the Bank] ..... having its Head Office at ..... (hereinafter referred to as the 'Bank', which expression shall, unless repugnant to the context or meaning thereof, include its successors, administrators, executors and assigns) do hereby guarantee and undertake to pay the Employer, on demand any and all money payable by the contractor to the extent of ..... (*) ..... as aforesaid at any time upto .....(@) ..... [days/month/year] without any demur, reservation, context, recourse or protest and/or without any reference to the Contractor. Any such demand made by the Employer on the Bank shall be conclusive and binding notwithstanding any difference between the Employer and the Contractor or any dispute pending before any Court, Tribunal, Arbitrator or any other authority. The Bank undertakes that the guarantee shall be irrevocable and valid till the completion of faithful performance of the Contract to the satisfaction of the Employer and/ or the Employer in writing discharges the Guarantee.

The Employer shall have the fullest liberty, without affecting in any way the liability of the Bank under this guarantee, from time to time to extend the time for performance of the Contract by the Contractor. The Employer shall have the fullest liberty, without affecting this guarantee, to postpone from time to time the exercise of any powers vested in them or of any right which they might have against the Contractor, and to exercise the same at any time in any manner, and either to enforce or to forbear to enforce any covenants, contained or implied, in the Contract between the Employer and the Contractor or any other course or remedy or security available to the Employer. The Bank shall not be released of its obligations under these presents by any exercise by the Employer of its liberty with reference to the matters aforesaid or any of them or by reason of any other act or forbearance or other acts of omission of commission on the part of the Employer or any other indulgence shown by the Employer or by any other matter or thing whatsoever which under law would, but for this provision, have the effect of relieving the Bank.

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

Our liability under the captioned guarantee is restricted to Rs..... (Rupees in words.....) and the guarantee will remain in force upto and including the date ..... (date of validity) and unless the claim under the guarantee is made on us before the date ..... (within 60 days beyond the validity date), all your rights under the said guarantee shall be forfeited and we shall be released and discharged from all liabilities thereafter.

Witness 1	Witness 1
Signature	Signature
Name & Address	Name & Address

(Official Address)

(Designation with Bank Stamp)
Power of Attorney No. .....
Date .....

Notes:

(*)This amount will be in accordance with Clause No 3.48.1 of this Bid Documentas the case may be.
(@)This date will be in accordance with Clause No 3.48.1 of this Bid Document asthe case may be.

1. The original bank guarantee against the CPSG should be sent to MAHAPREIT directly under Regd. Post (A.D.) by the issuing bank / branch. Where the original bank guarantee againstCPSG is handed over to the bidder, the bidder shall ensure that a copy of the bank guarantee against CPSG duly signed by the authorized representative of issuing bank along with covering letter has been sent immediately by the issuing bank/branch under Regd. Post (A.D.) directly to MAHAPREIT at the address mentioned in the bid document.
2. The bank guarantee shall be issued by any Nationalized Bank / Scheduled Bank

ANNEXURE 3

Deleted

ANNEXURE 4

Deleted

ANNEXURE 5

INDEMNITY BOND TO BE EXECUTED BY THE CONTRACTOR FOR THE REMOVAL / DISPOSAL OF SCRAP/DISPOSAL OF SURPLUS MATERIAL

(TO BE EXECUTED ON STAMP PAPER OF APPROPRIATE VALUE)

INDEMNITY BOND

This INDEMNITY BOND executed this ..... day of ..... 20..... by [Name of Company]....., a Company registered under the Companies Act, 1956/ the Companies Act, 2013/Partnership Firm/ Proprietary Concern and having its registeredoffice(s) at .....(Office Address)....., hereinafter called the Indemnifier(s)/Contractor(s) (which expression shall, unless excluded by or repugnant to the context, be deemed to mean and include its successors, administrators, executors and permitted assigns).

IN FAVOUR OF

Mahatma Phule Renewable Energy & Infrastructure Technology Limited (hereinafter referred to as "MAHAPREIT", which expression shall, unless repugnant to the context or meaning thereof, be deemed to include its successors and assigns), a Company incorporated under the Companies Act 1956, having its registered office at B-501 Pinnacle Corporate Park, Next to Trade Center, BKC, Bandra (East), Mumbai – 400051 (hereinafter referred to as "MAHAPREIT")

1. MAHAPREIT has awarded the Contractor(s), contract for execution of work ("Scope of Work") as mentioned in the contract agreement no..... dated ....., entered into between MAHAPREIT and Contractor(s), relating to (Name & Address of Project/Station) ..... (hereinafter called 'the Project').
2. The Indemnifier(s) for the purpose of execution of its Scope of Work had from time to time procured and stored .....(Details of Material) at the Project Site.
3. After completion of the Scope of Work by Indemnifier(s), it has been identified that scrap ..... (Details of Scrap Material & its Quantity).....and/or surplus ..... (Details of Surplus Material & its Quantity)..... belonging to Indemnifier(s) is lying at the said ProjectSite.
4. Now, the scrap ..... (Details of Scrap Material & its Quantity).....and/or surplus .....(Details of Surplus Material & its Quantity) belonging to the Indemnifier(s), requires to be removed by Indemnifier(s) from the Project Site.

NOW THEREFORE THIS INDEMNITY BOND WITNESSETH AS UNDER:

1. That Indemnifier(s) by way of this indemnity requests MAHAPREIT to issue approval in favour of Indemnifier(s) for removal of scrap .....(Details of Scrap Material & its Quantity).....and/or surplus .....(Details of Surplus Material & its Quantity).....belonging to Indemnifier(s), from the project.

2. That the Indemnifier(s) shall ensure clearing of its scrap ..... (Details of Scrap Material & its Quantity).....and/or surplus ..... (Details of Surplus Material & its Quantity)by_____itself, as aforesaid.
3. That Indemnifier(s) in consideration of the premises above, for itself and its respective, executors, administrators and assigns, jointly and severally agree and undertake from time to time and at all times hereafter to indemnify MAHAPREIT and keep MAHAPREIT indemnified from and against all claims, demands, actions, liabilities and expenses which may be made or taken against or incurred by MAHAPREIT by reason of the issue of necessary approval by MAHAPREIT and permitting Indemnifier(s) to remove scrap .....(Details of Scrap Material & its Quantity) and/or surplus .....(Details of Surplus Material & its Quantity)..... belonging to Indemnifier(s), from the project.
4. That Indemnifier(s) undertakes to indemnify and keep MAHAPREIT harmless from any act of omissionor negligence on the part of the Contractor in following the statutory requirements with regard to removal/disposal of scrap and surplus belonging to Indemnifier(s), from the Project Site aforesaid, by the Indemnifier(s). Further, in case the laws require MAHAPREIT to take prior permission of the relevant Authorities before handing over the scrap and/or surplus to the Indemnifier, the same shall be obtained by the Indemnifier on behalf of MAHAPREIT.

IN WITNESS WHEREOF, the Indemnifier(s), through its authorized representative, hasexecuted these presents on the Day, Month and Year first mentioned above at_____(Name of Place) on_____(Date).

Witness: Indemnifier

1. .....
2.
(Authorised Signatory)

ANNEXURE 6

INDEMNITY BOND TO BE EXECUTED BY THE CONTRACTOR FOR THE PLANT HANDED OVER BY MAHAPREIT FOR PERFORMANCE OF ITS O&M CONTRACT

(TO BE EXECUTED ON STAMP PAPER OF APPROPRIATE VALUE)

INDEMNITY BOND

THIS INDEMNITY BOND is made on this ..... day of ..... 20.....by ..... a Company registered under the Companies Act, 1956/ the Companies Act, 2013/Partnership Firm/Proprietary concern having its Registered Office at..... (hereinafter called as "Contractor" or "Obligator" which expression shall include its successors and permitted assigns) in favour of MAHAPREIT, a Company incorporated under the Companies Act, 1956 having its Registered Office at B-501 Pinnacle Corporate Park, Next to Trade Center, BKC, Bandra (East), Mumbai – 400051 and its Project at Sangli District in state of Maharashtra;

WHEREAS MAHAPREIT has awarded to the Contractor a Contract for vide its Award Letter/Contract No..... dated and its Amendment No.....

and Amendment No..... (applicable when amendments have been issued) (hereinafter called the "Contract") in terms of which MAHAPREIT is required to hand over various Equipmentand facilities provided under Supply Contract, Erection Contract, herein after called "Solar Photo Voltaic Plant" to the Contractor for execution of the Contract.

AND WHEREAS by virtue of Clause No. 3.32.4 of the said Contract, the Contractor is required to execute an Indemnity Bond in favour of MAHAPREIT for the Solar Photo Voltaic Plant handed over to it by MAHAPREIT for the purpose of Performance of the Contract/O&M portion of the Contract.

NOW THEREFORE THIS INDEMNITY BOND WITNESSETH AS UNDER

1. That in consideration of Solar Photo Voltaic Plant as mentioned in the Contract, Valued at Rs.....#..... (Rupees.....) handed over to the Contractor for the purpose of Performance of the Contract, the Contractor hereby undertakes to indemnify and shall keep MAHAPREIT indemnified, for the full value of the Solar Photo Voltaic Plant. The Contractor hereby acknowledges actual receipt of the Solar Photo Voltaic Plant as detailed in the Schedule appended hereto. The Contractor shall hold such Solar Photo Voltaic Plant in trust as a "Trustee" for and on behalf of MAHAPREIT.
2. That the Contractor is obliged and shall remain absolutely responsible for the safe O&M/protection and custody of the Solar Photo Voltaic Project against all risks whatsoever till completion of O&M Contract in accordance with the terms of the Contract and is taken over by MAHAPREIT. The Contractor undertakes to keep MAHAPREIT harmless against any loss or damage that may be caused to the Solar Photo Voltaic Plant.
3. The Contractor undertakes that the Solar Photo Voltaic Plant shall be used exclusively for the Performance/execution of the Contract strictly in accordance with its terms and conditions and no part of the Solar Photo Voltaic Plant shall be utilized for any other work or purpose whatsoever. It is clearly understood by the Contractor that non-observance of the obligations under this Indemnify Bond by the Contractor shall inter-alia constitute a criminal breach of trust on the part of the Contractor for all intents and purposes including legal/penal consequences.
4. That MAHAPREIT is and shall remain the exclusive Employer of the Solar Photo Voltaic Plant free from all encumbrances, charges or liens of any kind, whatsoever. The Solar Photo Voltaic Plant shall at all times be open to inspection and checking by Engineer-in-Charge o r other employees/agents authorized by him in this regard. Further, MAHAPREIT shall always be free at all times to take possession of the Solar Photo Voltaic Plant in whatever form the Solar Photo Voltaic Plant may be, if in its opinion, the Solar Photo Voltaic Plant are likely to be endangered, mis-utilized or converted to uses other than those specified in the Contract, by any acts of omission or commission on the part of the Contractor or any other person or on account of any reason whatsoever and the Contractor binds itself and undertakes to comply with the directions or demand of MAHAPREIT to return the Solar Photo Voltaic Plant without any demur or reservation.
5. That this Indemnity Bond is irrevocable. If at any time any loss or damage occurs to the Solar Photo Voltaic Plant or the same or any part thereof is mis-utilized in any manner whatsoever, then the Contractor hereby agrees that the decision of the Engineer-in-Charge of MAHAPREIT as to assessment of loss or damage to the Solar Photo Voltaic Plant shall be final and binding on the Contractor. The

Contractor binds itself and undertakes to replace the lost and/or damaged Solar Photo Voltaic Plant at its own cost and / or shall pay the amount of loss to MAHAPREIT without any demur, reservation or protest. This is without prejudice to any other right or remedy that may be available to MAHAPREIT against the Contractor under the Contract and under this Indemnify Bond.

6. NOW THE CONDITION of this Bond is that if the Contractor shall duly and punctually comply with the terms of and conditions of this Bond to the satisfaction of MAHAPREIT, THEN, the above Bond shall be void, but otherwise, it shall remain in full force and virtue.

IN WITNESS WHEREOF, the Contractor has hereunto set its hand through its authorized representative under the common seal of the Company, the day, month and year first above mentioned.

SCHEDULE

Particulars of theEquipment / Facilities handed- over	**Quantity**	**Value**	**Other details, (f any)**	**Signature of Attorney in token of receipt**

For and behalf of MAHAPREIT	For and behalf of M/s_____
Signature	Signature
Name & Address	Name & Address
Designation	Designation
Witness 1	Witness 1
Name & Address	Name & Address
Witness 2	Witness 2
Name & Address	Name & Address

* Indemnity Bonds are to be executed by the authorized persons and (i) in case of contracting Company under common seal of the Company or (ii) having the power of attorney issued under common seal of the company with authority to execute Indemnity Bonds.

In case of (ii), the original Power of Attorney if it is specifically for this contract or a Notarized copy of the Power of Attorney if it is a General Power of Attorney and such documents should be attached to Indemnity Bond.

The value shall be sum of Supply and Erection Contract value.

ANNEXURE 7

BID SECURITY FORMAT – BANK GUARANTEE

(To be stamped in accordance with Stamp Act, if any, of the country of the issuing Bank)

Bank Guarantee No. .....
Date. .....

To
Chief General Manager (RESCO II) (Designation)
Mahatma Phule Renewable Energy & Infrastructure Technology Limited.
B-501 Pinnacle Corporate Park, Next to Trade Center,
BKC, Bandra (East), Mumbai – 400051.

In accordance with Invitation for Bids under your Bid Document No .....having its Registered/ Head Office at_____(hereinafter called the Bidder') wish to participate in the said bid for Land Development and Power Evacuation works which includes land cutting & filling , removal of shrubs, trees, bushes etc, & providing of internal roads & chain link fencing with Power Evacuation & Transmission Infrastructure up to Inter connection Point of STU & obtaining connectivity with STU for setting up Solar Parks / Solar Project(s) in the State of Maharashtra.

As an irrevocable bank guarantee against Bid Security for an amount of (*) .....valid up to 120 days after .....(**)..... required to be submitted by the Bidder as a condition precedent for participation in the said bid which amount is liable to be forfeited on the happening of any contingencies mentioned in the Bidding Documents.

We, the [Name& address of the Bank] ..... having our Head Office at .....(#)..... guarantee and undertake to pay immediately on demand by MAHAPREIT, The amount of .....(*) without any reservation, protest, demand and recourse. Any such demand made by the 'Owner' shall be conclusive and binding on us irrespective of any dispute or difference raised by the Bidder.

This Guarantee shall be irrevocable and shall remain valid upto .....@..... If any further extension of this guarantee is required, the same shall be extended to such required period (not exceeding one year) on receiving instructions from M/s .....On whose behalf this guarantee is issued.

In witness where of the Bank, through its authorised officer, has set its hand and stamp on Dated this.....day of.....20... .....at.....

WITHNESS

.....	.....
(Signature)	(Signature)
.....	.....
(Name)	(Name)
.....	.....
(Official Address)	(Designation with Bank Stamp)

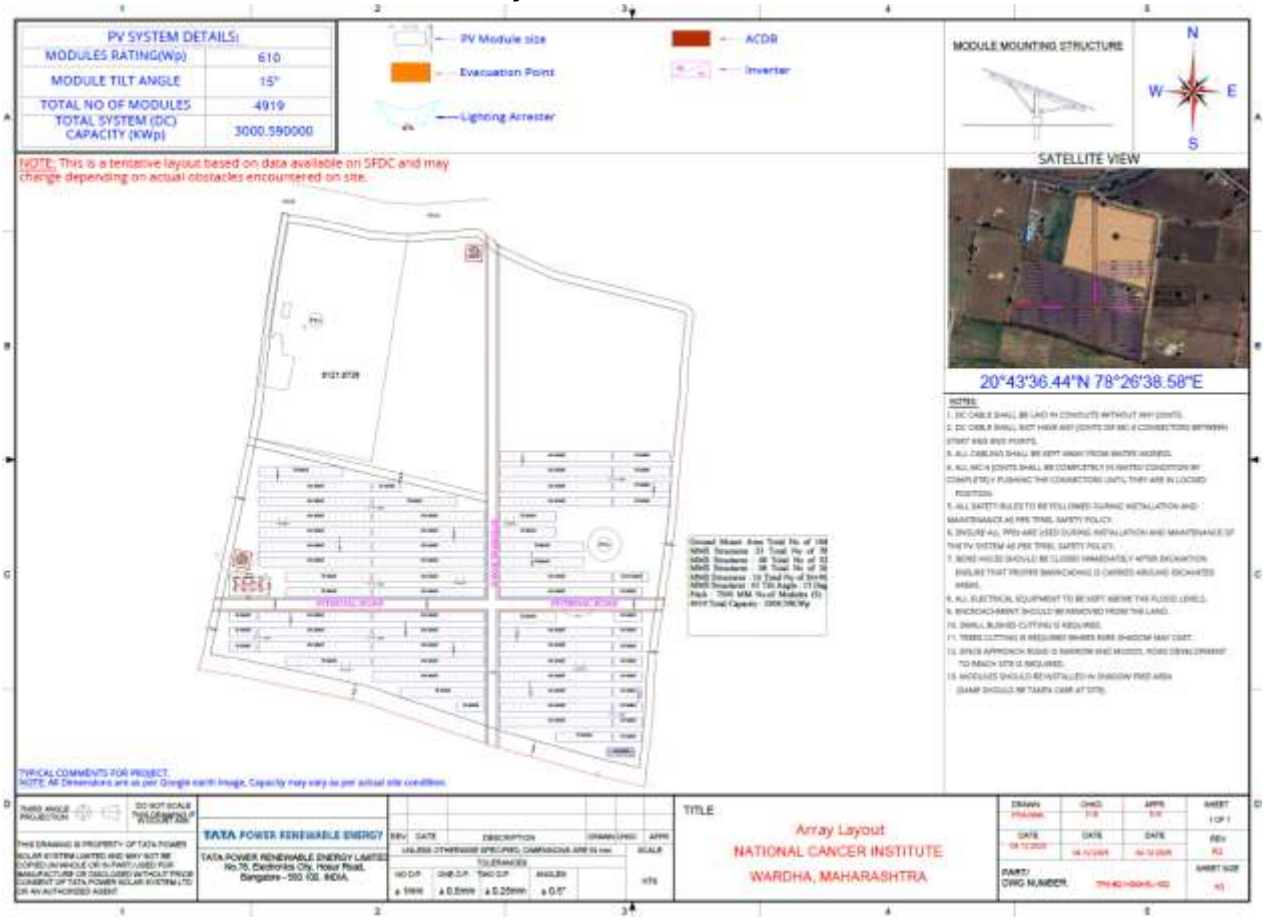
Attorney as per Power of
Attorney No.....
Date.....

NOTE: 1. (*) The amount shall be as specified in NIT
(**) This shall be the date of expiry of Bids validity
(#) Complete mailing address of the Head Office of the Bank to be given

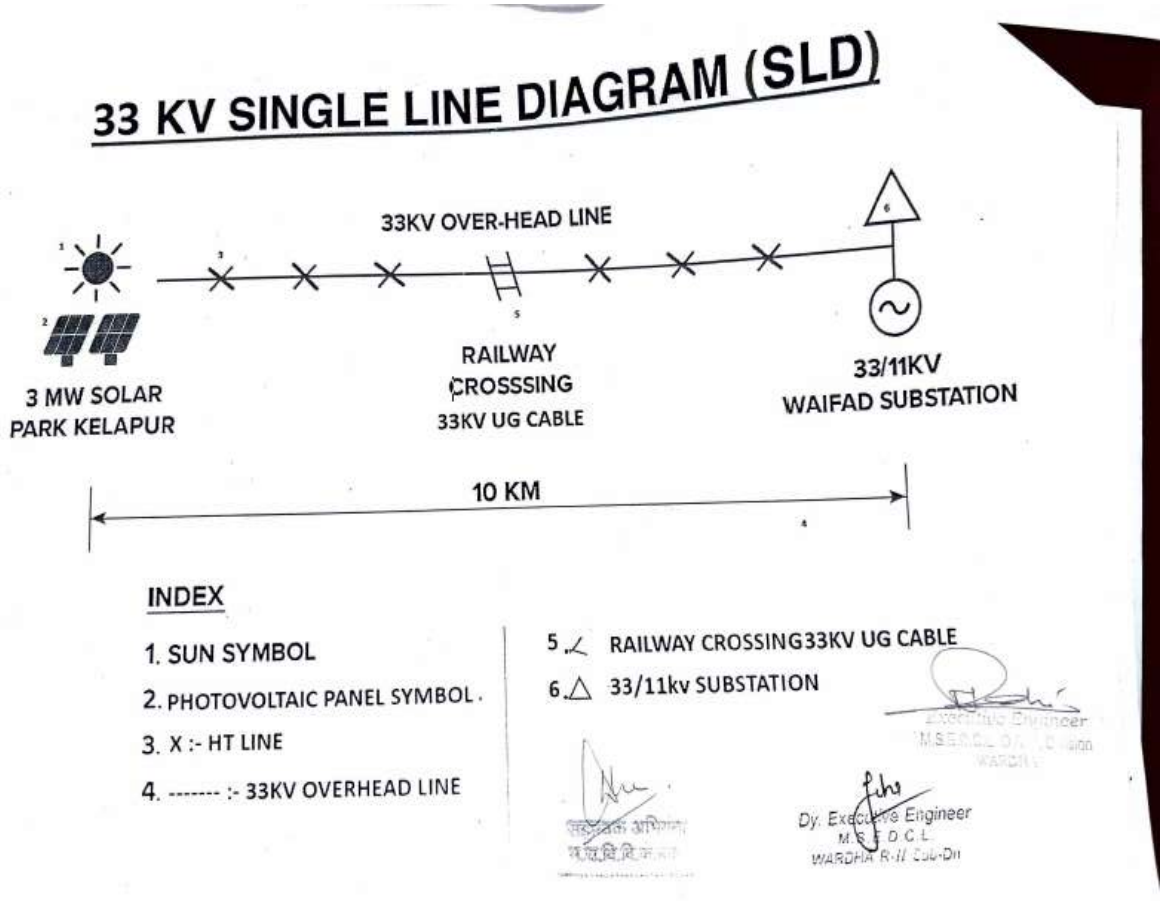
(@)This date shall be forty-five (45) days after the last date for which the bid is valid

2. The Bank Guarantee should be issued by the bank meeting the requirement specified in clause 2.8 of bid document.
3.The Stamp Paper of appropriate value shall be purchased in the name of guarantee issuing Bank.
4.Power of attorney no. and date as well as signature & full name & designation of executants along with Bank's stamp are there. Signature, full name, designation & address of witness are there.

Layout for Plant location



33KV SLD



Note:

1. **Quantity mentioned in the tender is indicative, bidder to visit the actual site and assess the requirement for completion of the Land Development and Power Evacuation works with 33KW substation for 3 MW Solar Power Project on land at Kelapur, Taluka Wardha, District Wardha for National Cancer Institute Nagpur, which includes land cutting & filling, removal of shrubs, trees, bushes etc., & providing of internal roads and drainage with Power Evacuation & Transmission Infrastructure up to Inter Connection Point of STU.**

*******END OF SECTION*******