

**MP POWER TRANSMISSION COMPANY LTD  
BLOCK NO. 3, RAMPUR, SHAKTI BHAWAN,  
JABALPUR**

**TENDER SPECIFICATION  
NUMBER TR-47/2018**

**ASSET MAPPING OF VARIOUS TRANSMISSION LINES AND SUBSTATIONS  
USING MODERN DGPSSURVEY TECHNIQUES AND WEB BASED  
TRANSMISSION ASSET MANAGEMENT SYSTEMS**



**COST OF TENDER DOCUMENT:-Rs.22400.00(including GST@12%).00 + Rs.  
150.00**

**CHIEF ENGINEER (PROCUREMENT)  
MP POWER TRANSMISSION CO. LTD., JABALPUR  
Regd.Office : Block No. 2, Shakti Bhavan, Rampur, Jabalpur- 482 008 (M.P.)**

**MADHYA PRADESH POWER TRANSMISSION COMPANY LIMITED  
RAMPUR :JABALPUR 482 008**

**TENDER FORM**

The undersigned hereby tender and offer (subject to MPPTCL's conditions of tendering), the M.P. Power Transmission Company Limited to test and supply the plant machinery and material, delivery and execute and do the several works and things which are described or referred to in the enclosures and schedules to the Specification TR-47/2018 copies of which are annexed hereto and which under the terms thereof are to be supplied, executed and done by the contractor in a thoroughly good and workman like manner and to perform and observe the provisions and agreements or the part of the contract contained in or reasonably to be inferred from the said tender documents for the sums and at the rates set out in schedules annexed hereto.

It is confirmed that (i) Questionnaire for commercial terms and conditions and (ii) All other conditions, wherever described in the tender documents have been replied in full giving clear details. It has been noted that in case any reply is not given or any reply is incomplete/ambiguous the Company will have the right to interpret to its best advantage. Company's decision in this regard will be final and binding. The Bidder will have no right to furnish any technical or commercial clarification after opening of the bid which may in any way alter the offered prices.

System generated receipt dated ----- for online payment towards cost of tender specification No.TR-47/2018 is enclosed along with documents submitted in hard copy.

Dated this.....

Bidder's Name & Signature  
with seal of the company.

## **SECTION-I**

### **TENDER CONDITIONS & INSTRUCTIONS TO BIDDERS**

#### **S.No. TITLE**

1. Scope
2. Detailed work to be carried out
3. Eligible bidders
4. Bid submission
5. Important tender details & key dates and basic tender information
6. Important tender details and key dates & basic tender information
7. Instructions to bidders
8. Earnest money
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11. Technical Presentation
12. Bids Evaluation and Qualification Methodology
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## **SECTION – I**

### **GENERAL CONDITIONS & INSTRUCTIONS TO THE BIDDERS**

#### **1.1.0 SCOPE:**

The scope of work to be executed against this specification shall be in complete conformity with the stipulations made in various sections of this specification. This includes overall Project Management on Turnkey basis involving Survey, Planning, Design, Engineering, Documentation, Integration, Supply, Delivery to site, Unloading, Insurance, Storing, Handling, transportation to final locations, Installation, Termination, Testing, Demonstration for acceptance, and Commissioning of comprehensive **Transmission Assets Management System(TAMS)** in the State of Madhya Pradesh for MPPTCL & other equipments/ materials/modules & accessories, implementing and maintaining the system during performance guarantee period and transfer of skill to run the system to MPPTCL personnel through training. The TAMS system shall mean supply, installation and commissioning of TAMS software including associated hardware etc. meeting project requirement as per Bidding Document. The project also aims to provide Services for erection, testing, commissioning & necessary software services for TAMS along with associated equipments/ materials, implementing activities etc. at three Transmission Control Centers, SLDC & EHV Substations.

This project aims to develop modern and comprehensive Transmission Assets Management System in the State of Madhya Pradesh through Geodetic Control Surveys and implementation of Geographical Information System (GIS). Geographic Information System solution consists of capturing, storing, checking, integrating, manipulating, analyzing and displaying present spatial or geo-reference data related to positions on the Earth's surface and data related to attributes of the EHV transmission lines and substations of MPPTCL all over Madhya Pradesh. This is to be achieved through GIS mapping to pre-defined scale, generation of intelligent transmission network maps and super-imposing them on the land base GIS maps. This project will be launched with the mapping of Electrical Transmission lines on the backdrop of freely available satellite imaginaries like Google/Bing or similar on web.

The functional requirement, System Architecture and other Software & Hardware requirement of the proposed System is detailed in Bidding Document. The bidders are requested to go through the same carefully. Further, prior to submission of offer bidders are advised to visit SLDC, Transmission SCADA Control Centers and the EHV Substations at their own expense to assess requirement of the project for submission of most competitive offer.

The Bidder's designated representative is invited to attend a **pre-bid meeting**. The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage. The **pre bid meeting** will be held at 15:30 hours on **dated 04.08.2018** at Conference Hall, Block No. 3 Shakti Bhawan, Rampur, Jabalpur. Any change in above date / time/ venue shall be published on the MPPTCL's website: <http://mptransco.nic.in> and also on the e-procurement portal of GoMP. <http://www.mpeproc.gov.in>

**1.1.1** The total scope of the project includes the implementation of TAMS Scheme as follow:

- i. Geodetic Control Surveys i.e. Capturing, storing, checking, integrating, manipulating, analyzing and displaying present spatial or geo-reference data related to positions on the Earth's surface.
- ii. Developing Geographic Information System representing **Georeferencing** using standard **coordinate reference system and Geo Mapping**.
- iii. Development of complete software Application with Database, displays and reports.
- iv. Supply of equipments and materials and operators for implementation of TAMS Scheme on Turnkey basis.
- v. Integration of all the related equipments.
- vi. Installation of TAMS on MPPTCL server.
- vii. The services for integrating the TAMS Scheme with the Remote Viewing Terminal shall also be deemed to be included in the services of implementing the TAMS Scheme.
- viii. Comprehensive Maintenance of the supplied system and Supply of Spares identified under AMC along with main items to meet the contingency during defect liability period and during Annual Maintenance period as per **Section-V**.
- ix. Supply of additional Hardware, software and services necessary to ensure compatibility with existing equipment installed under MP Transmission.
- x. Documentation, Training to MPPTCL personnel and testing to fully supported software. The System shall be used for real-time operation.
- xi. The system is required for management of existing transmission network, without addition of any further hardware. However, the system is required to be designed as per future expandability by addition of necessary hardware & software.
- xii. Bidders shall use as much standard equipments and software as possible; however, all of the functional requirements of this Specification must be satisfied.
- xiii. The use of the contractor's standard software may cause the contractor to conclude that there is need for additional items not specifically mentioned in this Specification. The contractor shall supply all such items and provide a complete TAMS system that meets all of functional requirements defined in this Specification.
- xiv. All measures to ensure cyber security of the complete TAMS System as per international standard or CERT. In norm shall be ensured by the Contractor. The scope includes monitoring & Annual Security Audit of Cyber Security System from the CERT, in listed auditors.

**1.1.2** The intent of the specification is to describe project overview and Technical Specification for TAMS System and implementation of the project, performance requirement of various components, maintenance and support services required from the contractor under the project. The Specification described for TAMS, are tentative and the softwares with better specifications and standards will also be acceptable. Therefore, you are requested to go through the specification thoroughly and keeping in view redundancy,

upgradation, operation ability of the TAMS System and its component may submit offer.

- 1.1.3** It may be specifically noted that TAMS System shall be integrated with the Transmission **ERP System** which presently has the GPRS/GSM communication with the EHV Substations. In future based on availability or a better, cost effective communication system, the ERP system may be integrated with new communication system. The TAMS System may therefore shall required to be integrated without any software / other problem and without losing security, reliability, operation ability and control functions.
- 1.1.4** In event of the configuration of TAMS system given in specification undergo changes during detailed engineering, the prices of particular TAMS component may be adjusted based on the unit prices.
- 1.1.5 The installation work of TAMS system shall be taken up in two phases.** In the **first phase**, 10% of the ordered quantity and connecting Substations shall be covered as **Pilot Project** along with implementation of TAMS System at HQ and all three control centers. In **second phase**, balance survey work and implementation of TAMS functionality at balance Transmission Lines & EHV substations shall be done. However, before undertaking second phase works, the successful bidder will be required to implement pilot project successfully. In case of failure to prove capability for this work, the MPPTCL shall be at liberty to cancel the order without liabilities on either side. The first phase works are to be completed in a period of 9 months from date of order. Completion of installation of TAMS system covering all existing transmission lines and substations in the second phase shall be done by the successful bidder for quantum indicated in Annexure-I(A) & I(B).
- 1.1.6** **The** scope of work under this contract shall also include all such items which are not specifically mentioned in the Documents and/or your offer but are necessary for the successful completion of scope under the Contract, unless otherwise specifically excluded in the Specification Documents.
- 1.1.7** The Contract will include supply of all equipments and materials (whether in India or abroad) including spares and Routine/ Type Tests to be conducted (whether in India or abroad) and for providing all services i.e. port handling and custom clearance of imported goods and loading, inland transportation for delivery at site, insurance, unloading, storage, handling at site, and providing any other services specified in the Contract Documents for satisfactory execution of this Contract.
- 1.1.8** The bidders are required to offer for complete scope of the TAMS. In case offers do not cover complete scope of supply/ work, offer will be rejected and will not be considered. Specific requirements of commercial matters are indicated under various clauses of this Section.
- 1.1.9** The detailed technical specification for TAMS system including associated equipments/ materials etc. has been described in Section-IV& Section-V. Bidders are requested to go through our technical requirements carefully. It may be noted **that** furnishing of all information as required is a must. In case, desired information is not furnished or confirmations as required are

not given, the offer will be treated as incomplete and may be liable for rejection without any correspondence by the MPPTCL.

### **1.2.0 DETAILED WORK TO BE CARRIED OUT:**

The quantity of Geo-referencing & Geo-Mapping associated with development of Geographic Information System of Transmission lines of MPPTCL has been indicated in **Annexure-I.(A)** and **Annexure-I.(B)** out of which **13000Kms of Transmission lines and 250 nos. substations are covered in this bid.**

**The Bidders are allowed to submit their bids subject to fulfilling financial and experience criteria as prescribed in the Bid.**

### **1.3.0 ELIGIBLE BIDDERS**

This Invitation for Bids, issued by the Employer is open to all firms meeting our qualification requirements including company(ies), Government owned Enterprises registered and incorporated in India as per Companies Act, 1956.

### **1.4.0 BID SUBMISSION:**

**1.4.1** Bidders are requested to submit their bids as per conditions of this bidding document. Any deviation from conditions as specified herein; the Bid will not be accepted.

**1.4.2** Bidders are required to furnish the Bids electronically on e-procurement website at <http://www.mpeproc.gov.in> by following procedure given below:-

- (a) **Registration with e-procurement site:-** For participation in e-tendering module of MPPTCL, it is mandatory for prospective bidders to get registration on website <http://www.mpeproc.gov.in> for submission of their bids online. Therefore, it is advised to all prospective bidders to get registration by online payment of registration fees at the earliest. Offline bids shall not be entertained by the MPPTCL for the tenders published on e-procurement platform. For registration and online bid submission, Bidders may contact HELP DESK of **M/s Tata consultancy service Limited, 5<sup>th</sup> floor, Corporate Block, DB Mall, Arera Hills, Bhopal-462 011, Toll Free No. 1800-2588-684, E-mail Address: roc\_helpdesk@mpsdc.gov.in**. The details are available on the e-procurement website <http://www.mpeproc.gov.in> for registration.
- (b) **Payment of Transaction Fee:-** It is mandatory for all the participant Bidders to electronically pay a Non-refundable Transaction fee to M/s **Tata consultancy service Limited**, the service provider through "Payment Gateway Service on E-Procurement platform".
- (c) **Tender Document:-** The Tender documents can be purchased ONLY online. The Tender shall be available for purchase to concerned bidders immediately after online release of the Tender and upto scheduled date and time as set in the key dates. The tender document can be downloaded without making any payment, however the same cannot be used for bid submission. The Bidders are requested to download the tender document and read all the terms and conditions mentioned in the tender

Document and seek clarification if any from the Tender Inviting Authority. Arrangements have been made for the Bidders to make payments online. In case of online tendering, the application form for the purchase of tender documents shall not be required.

The Bidders can purchase the tender documents online from website <http://www.mpeproc.gov.in> by making online payment for the tender document fees of Rs. 22,400/- using the service of the secure electronic payments gateway (see point 1.3.2(d) below for further details), and should print out the system generated receipt for their reference which can be produced whenever required. Service and gateways charges shall be borne by the bidders. Tender cost is not refundable.

- (d) **Electronic Payment Account:** As the tender documents shall be available for purchase only online, Bidders are required to pay the Tender Document fees online using the Online Payments Gateway Service integrated into the e-Procurement System. For the list of available modes of electronic payments that are presently accepted on the Online Payments Gateway Service, please check the link, List of e-Payments accepted Online' on <http://www.mpeproc.gov.in>.

- (e) **Digital Certificate authentication:-**

The Bids submitted online should be signed electronically with a Class III Digital Certificate to establish the identity of the Bidder submitting the Bid online. The Bidders may obtain Class III Digital Certificates issued by an approved Certifying Authority authorized by the Controller of Certifying Authorities, Government of India.

**A Class-III Digital Certificate is issued upon receipt of mandatory identity proofs along with an Application Form. Only upon the receipt of the required documents, a Digital Certificate can be issued.**

**Note:- It may take upto 7 to 10 working days for issuance of Class III Digital Certificate, hence the bidders are advised to obtain them at the earliest.**

**Important Note:** Bid for a particular tender can be submitted during the ONLINE BID SUBMISSION stage only using the Digital Certificate that is used to encrypt the data.

In case, during the process of a particular tender, the bidder loses his Digital Certificate because of any problem (such as misplacement, virus attack, hardware problem, operating system problem, etc.); he may not be able to submit his bid online.

Hence, the bidders are advised to keep their Digital Certificates in a safe place under proper security to be used whenever required.

The digital certificate issued to the Authorized User of a Partnership firm / Private Limited Company / Public Limited Company / Joint Venture and used for online bidding will be considered as equivalent to a no-objection



certificate / power of attorney to that user.

In case of Partnership Firm, majority of the Partners have to authorize a specific individual through Authority Letter signed by majority of the Partners of the firm.

In case of Private Limited Company, Public Limited Company, the Managing Director / any other Person (having designated authority to authorize a specific individual) has to authorize a specific individual through Authority Letter.

Unless the certificate is revoked, it will be assumed to represent adequate authority of the specific individual to bid on behalf of the Organization for online tenders as per Information Technology Act 2000. This Authorized User will be required to obtain a Digital Certificate. The Digital Signature executed through the use of Digital Certificate of this Authorized User will be binding on the firm. It shall be the responsibility of Management / Partners of the concerned firm to inform the Certifying Authority, if the Authorized User changes, and apply for a fresh digital certificate for the new Authorized User.

(f) **Set up of Bidder's Computer System :**

In order for a Bidder to operate on the e-Procurement System, the Computer System of the Bidder is required to be set up for Operating System, Internet Connectivity, Utilities, Fonts, etc. A help file on setting up of the Computer System can be obtained from e-Procurement Cell of M/s Tata Consultancy Service Limited, Bhopal.

(g) **Publishing of NIT :**

For the Tenders processed using the e-Procurement System, only a brief Advertisement related to the Tender shall be published in the newspapers, and our Company's website [www.mptransco.in](http://www.mptransco.in). The Detailed Notice shall be published on the e-Procurement System. The bidders can view the Detailed Notice and the time schedule for all the Tenders processed using the e-Procurement System on the website <http://www.mpeproc.gov.in> and our Company's website [www.mptransco.in](http://www.mptransco.in)

(h) **Key Dates :**

The Bidders are strictly advised to follow the time schedule (Key Dates) of the Tender for their side for tasks and responsibilities to participate in the Tender, as all the stages of each Tender are locked before the start time and date and after the end time and date for the relevant stage of the Tender as set by the concerned Department Official. Hence, once the time schedule for a particular stage is lapsed then that task will be locked and the Bidders who have not completed the task in time may not be able to participate in the tender. It should be appreciated that sufficient time

duration is given for each stage and therefore, it is the responsibility of Bidders to complete the process well within time rather than waiting for the last day of submission. MPPTCL & **Tata Consultancy Service Limited** holds no responsibility for the non submission of bids due to such delay/ negligence of the Bidders.

(i) **Bid submission :**

Bidder should duly upload the documents and fill the bids. The online tender should be submitted before Bid Submission End date.

(j) **Submission of Earnest Money Deposit (EMD) :**

The Bidder shall furnish as part of its Bid, Earnest Money along with their offer. The amount of Earnest Money shall be ₹30.00 lakh. The Earnest Money shall be acceptable in the forms described in the clause-1.7.0 of this section in detailed.

- i. The Bank Guarantee of EMD shall be physically submitted in a sealed envelope super scribing "EMD of ₹30.00 lakh in the form of BG against tender no. TR-47/2018".
- ii. The prospective bidders, who are submitting EMD envelope in physical form as detailed above for respective tender, will upload scanned self certified copies of requisite EMD documents on the website along with tender offer.

(k) **Techno Commercial Bid :**

Bidders must positively complete on line e-tendering procedure at <http://www.mpeproc.gov.in>. They shall have to submit the following documents online in the website.

- i. Their complete techno-commercial offer containing detailed description, specification and all commercial terms and conditions. This document should not contain any price part.
- ii. Techno-commercial information in the form of questionnaire and schedules as indicated in clause 1.8.0 of Section -1.
- iii. Hard copies of above techno-commercial offer, questionnaire and schedules (uploaded in the website) must be submitted in a separate sealed envelope super scribing "Techno-commercial bid for tender No.:.TR-47/2018"

(l) **Price Bid :**

Bidder shall have to submit the price bid documents downloaded from website and uploaded as per instructions therein. Physical submission of price bid will not be considered. The price bid of techno-commercially qualified bidder shall be opened online at the notified date at [www.mpeproc.gov.in](http://www.mpeproc.gov.in) . Bidders can view information of date of price bid opening by logging in to website.

(m) **Opening of Bids:**

During the online Techno Commercial bid opening, the EMD/ Tender cost part of all the Bidders will be opened first and after the verification of the uploaded as well as physical copy of EMD/ Tender cost, the offers will be

short listed for Techno-Commercial opening. Subject to fulfillment of conditions related to tender cost / earnest money deposit, the techno-commercial bids shall be opened and after evaluation of the same, the decision will be taken for selection of offers for the purpose of opening of price bid.

(n) **Change in date & time of opening of bids:**

Tender shall be opened on the due date and time as notified in the presence of the Bidder or their authorized representative who may be present. If the due date of opening / submission of tender documents is declared a holiday by the Central/State Govt. or Local administration, it will automatically get shifted to the next working day, for which no prior intimation shall be given. The tender opening shall be continued on subsequent dates in case the opening of all the Bidder is not completed on the date of opening.

In the event of any issue, the bid data in question shall be liable for a due process of verification by the authorized officer of e-procurement system of Madhya Pradesh Power Transmission Co. Ltd., Jabalpur.

It may please be noted that the due date/time of opening can be altered, extended, if desired by the company without assigning any reason thereof. However, due intimation shall be given / published.

(o) **Hard Copies:-**

- i. All the Bidders shall invariably upload the scanned copies of BG towards EMD and system generated money receipt for online payment for Tender Cost in e-procurement system and this will be the primary requirement to consider the bid responsive.
- ii. The Techno-commercial bid evaluation shall be carried out solely based on the uploaded certificates/ documents, BG towards EMD, system generated receipt for Tender Cost in the e-procurement system.
- iii. The Bidders shall invariably furnish the original BG towards EMD, system generated receipt for Tender Cost, hard copies of Certificates/ Documents uploaded including Schedules (except Schedule-1) to the Tender Inviting Authority **within the date and time specified in the Bid**, either personally or through courier or post and the receipt of the same within the stipulated date shall be the responsibility of the Bidder. The department will not take any responsibility for any delay in receipt/non-receipt of original BG towards EMD/Tender Cost, Certificates/Documents from the Bidders before the stipulated time. On receipt of documents, the department shall ensure the genuineness of the BG towards EMD/Tender Cost and all other Certificates/ Documents uploaded by the Bidder in e-procurement system in support of the qualification criteria before opening of Price Bid.
- iv. If any Bidder fails to submit the original hard copies of uploaded certificate/documents, BG towards EMD/ Tender Cost within stipulated time or if any variation is noticed between the uploaded documents and the hardcopies submitted by the Bidder, his bid shall not be considered for opening.

- v. The Bidder has to keep track of any changes by viewing the addendum/corrigendum issued by the tender Inviting Authority on time-to-time basis on e-Procurement platform. The Department calling for tender shall not be responsible for any claims/problems arising out of this.

### 1.5.0 IMPORTANT TENDER DETAILS AND KEY DATES & BASIC TENDER INFORMATION:

#### A: Important Tender Details :

1	Department Name	:	<b>M.P.P.T.C.L</b>
2	Name of Purchaser	:	<b>ChiefEngineer (Procurement)</b>
3	Tender Number	:	<b>TR-47/2018</b>
4	Name of the Tender	:	<b>Asset mapping of various transmission lines and substations using modern DGPSsurvey techniques and web based transmission asset management systems</b>
5	Tender Type	:	<b>Single Stage Two Envelope</b>
7	Transaction Fee payable to	:	<b>M/s Tata consultancy service Limited</b>
8	Tender Cost	:	Rs 22400/-
9	Tender Cost payable	:	<b>On line payment</b>
10	Bid submission	:	<b>Online</b>
11	Place of Tender opening	:	<b>Jabalpur</b>
12	Officer Inviting Bids	:	<b>Shri S.P.Gupta Chief Engineer (Procurement)</b>
13	Contact Person	:	<b>Shri Ajay Shrivastava SE(II) O/o CE(Procurement)</b>
14	Address/ E-mail id	:	<b><u>mptransco.nic.in</u></b>
15	Contact Details: Tel. No./Fax	:	<b>0761-2702264, 2702135 0761-2665593</b>

#### Key Dates:-

Sr. No.	Description	Start Date & Time	End Date & Time	Envelope
1	Purchase of tender	17.07.2018 10:30 Hrs	27.08.2018 17:00 Hrs	--
2	Online Bid submission	18.07.2018 10:30 Hrs	27.08.2018 17:30 Hrs	Envelope C, Envelope A, Envelope B
3	Physical submission of hard copies	18.07.2018 10.30 Hrs	28.08.2017 17:30 Hrs	
4	<b>EMD &amp; Techno Commercial bid opening</b>	29.08.2018 15:30 Hrs	--	<b>Envelope A, Envelope B</b>

<b>Sr. No.</b>	<b>Description</b>	<b>Start Date &amp; Time</b>	<b>End Date &amp; Time</b>	<b>Envelope</b>
5	<b>Financial / Price Bid opening (for qualified Bidders only)</b>	25.09.2018 15:30 Hrs	--	<b>Envelope C</b>
6	<b>Pre-Bid Meeting</b>	A pre-bid meeting will be held at 15:30 hours on 07.08.2018, at conference Hall, Director Technical, Block No 3, Shakti Bhawan, Rampur, Jabalpur.		

Note

- (1) The bidder has to quote their rates online only in **Schedule-1**. The price bid shall be uploaded online in **Envelope-(C)** as per schedule of key dates. Please note that, the Schedules of price bid (Schedule-1), i.e. Financial/Price bid (**Envelope-C**) will not be accepted physically. In case Envelope-C is submitted physically the bid will be rejected. The bid of the eligible bidder for the respective item shall be opened online as per key dates.
- (2) Last date for submission of physical documents in Two sets (One Original + One copy) will be one day prior to the due date of opening of tender as per online key dates. The same shall be opened (online & physical) as per key dates.
- (3) The bidders have to submit EMD alongwith system generated money receipt for online payment for tender cost in e-procurement system online in **Envelope-(A)** in physical form & also upload scan copy of the same as per key dates.
- (4) The bidders have to submit documents in **Envelope-(B)** as detailed in clause 1.6.0 of this Section.
- (5) The bidder has to upload the check list as per **Schedule-7** online in Envelope-(B) and also submit physical copy of the same.
- (6) The date of opening of financial / price bid may vary depending upon time taken in techno-commercial evaluation. The bidders may please keep them updated of price bid opening from the e-portal.

### **1.6.0 INSTRUCTIONS TO BIDDER :**

**1.6.1** In **Schedule-2**(Commercial Questionnaire), various important techno-commercial terms and conditions are given. It is necessary to furnish all the information as per Questionnaire. The Questionnaire duly filled in and signed has to be submitted along with the Bid.

**1.6.2** The price bid shall include submission of details of prices strictly as per **Schedule-1** (Schedules of prices and quantity) in standard **online** format. It may be mentioned that no such information should be furnished in the price bid which may not be in conformity with details furnished in techno-commercial bid. In case of any discrepancy, suitable loading on prices will be considered for which responsibility will rest on the Bidders.

- 1.6.3 Further** submission of any additional information or document after opening of techno-commercial part of tender, which may affect the financial commitment or technical/commercial eligibility of Bidder, will not be allowed.
- 1.6.4** It is obligatory on the part of the Bidders to comply with all our commercial terms & conditions.
- 1.6.5** The MPPTCL reserves the right (i) to reject any or all Bids or to accept any Bid considered advantageous to the MPPTCL whether it is the lowest Bid or not and (ii) to split the quantities against the Bid on more than one firm for the same work. No reasons will be assigned by the MPPTCL for this and this will be binding on the Bidders.
- 1.6.6** The offer should be made out in English. Documents, if submitted in any other language **must** be accompanied by English translations.
- 1.6.7** The quoted rates for detailed survey shall be FIRM and no increase on these rates shall be allowed under any circumstances. If contractor quotes the rates for part work the tender will not be acceptable.
- 1.6.8** The Bidders shall submit their eligibility and qualification details, techno-commercial bid (**Schedule-2, 3, 4A, 4B, 5, 6 and Schedule-7**) in the standard formats appended with the Bid documents. The Bidder shall sign on the statements, documents, certificates, owing responsibility for their correctness/ authenticity. The Bidder shall attach/ upload all the required documents for the specific tender during the bid submission as per the tender notice and bid document.
- 1.6.9** On the due date of e-tender opening, techno-commercial bid of qualified bidders (of those bidder having desired credential and EMD as per NIT) will be opened on line. MPPTCL reserve the right on extension of due date of opening of techno-commercial bid, considering participation of qualified bidders in the tender.
- 1.6.10 The** Bidder will be solely responsible for the correctness / genuineness of the downloaded tender documents from the website. If the offer submitted through the downloaded tender documents, which are incomplete or with changed contents, the offer will be summarily rejected.
- 1.7.0 EARNEST MONEY:**
- 1.7.1** Bidder shall furnish, as part of its bid, a bid security an amount of **INR 30.00 lakh** ("as specified in Proforma\_\_\_\_\_"). The bid security must be submitted in the form of bank guarantee and scanned copy must be uploaded as provided in the Bidding Documents. In case, the Bid is submitted by a JV, the bid security shall be uploaded & submitted in the name of lead partner of JV.
- 1.7.2** The bid security shall be a bank guarantee from a scheduled commercial bank selected by the bidder and located in India. The format of the bank guarantee shall be in accordance with the form of bid security included in the Bidding Documents. Bid security shall remain **valid for a period of thirty (30) days**

**beyond the original bid validity period, and beyond any extension** subsequently requested.

- 1.7.3** Anybid not accompanied by an acceptable bid security shall be rejected by the MPPTCL and shall be returned unopened.
- 1.7.4** In case any discrepancy is noticed in the amount of bid security mentioned in figures and in words, the amount mentioned in words shall be considered to verify adequacy of bid security.
- 1.7.5** The bid securities of non-responsive bidders will be returned as promptly as possible. Bid securities of all responsive bidders shall be returned after submission of performance security by the successful bidder.
- 1.7.6** The bid security may be forfeited
- (a) If the Bidder withdraws its bid during the period of bid validity specified by the Bidder in the Bid Form; or
  - (b) In case the Bidder does not withdraw the deviations proposed by him, if any, at the cost of withdrawal stated by him in the bid; or
  - (c) If a Bidder does not accept the corrections to arithmetical errors identified during preliminary evaluation of his bid; or
  - (d) In the case of a successful Bidder, if the Bidder fails within the specified time limit
    - (i) to sign the Contract Agreement, or
    - (ii) to furnish the required performance security.

**1.8.0 QUALIFYING REQUIREMENT:**

**1.8.1** The Bidders will have to substantiate that they have capacity to supply& implement the offered TAMS Scheme within specified implementationschedule and they have dealt in similar System and have capacity to integrate the Scheme with ERP System& SCADA System of MPPTCL. Bidders may please note that the qualifying requirement is required to be fulfilled which will be evaluated on pass-fail system. The offers passing qualifying requirement stipulated below will only be considered for further evaluation. It may be noted that for the purpose of qualifying this requirement, the Bidder will have to submit clear certificates/documents as under:-

**a. General Experience:**

Bidder (Sole bidder/each partner of JV) should have a minimum experience of five years of Capturing, storing, checking, integrating, manipulating, analyzing and displaying present spatial or geo-reference data related to positions on the Earth's surface, developing GIS, Geo Mapping, integration inputs & generating reports using software, integration of data with existing environment etc. in Power Sector.

**b. Specific Experience:**

The bidder must have successfully **completed one** similar work costing not less than **Rs. 12.00 Crore**, as a prime contractor, during last 5(five) years counted upto the date of opening of tender.

The requirement for various bidders will be as under:

- i. Sole bidder/All partners combined:-Must meet the requirement
- ii. Lead partner of JV- Must have completed at least one similar work costing not less than Rs. 8 Crore to participate as lead bidder.

- c. **Performance:**Atleast one **TAMS** system of value not less than **Rs. 12 crore** completed by the bidder (Sole bidder/one partner of JV) should be in satisfactory operation for at least one year period counted upto the date of opening of tender in Power Sector. Performance certificate from at least one Power utility/user agency certifying that the **TAMS** system is in operation satisfactorily for a period of one year or more is required to be submitted.
- d. **Key Personnel:-** Requirement as specified in Clause 1.11.1.5(B) must be fulfilled by the Bidder.

**1.8.2** Cost of previous completed works shall be given a simple weightage of 10% per year to bring them at current price level, while evaluating the qualification requirement of the bidder. Such weightage shall be considered after end date of completion. Updating will be considered for full or part of the year (total no. of days / 365) i.e. considering 365 days in a year, till the last day of month previous to one in which bid has been opened.

**1.8.3** The Bidder should submit the details of such similar completed works as per Schedule-3 enclosed.

**1.8.4 FINANCIAL CRITERIA:**

Submission of audited "standalone" balance sheets and income statements or, if not required by the law of the Bidder's country, other financial statements acceptable to the Employer, for the last five financial years (if Bid is due for submission after September) or five financial years before last financial year (if the bid is due for submission before October). The audited financial statements for the last five (5) years submitted by Bidder shall be evaluated.

**(A) Financial Status**

The Networth of the Bidder (Sole/all individual JV Partners) as per last financial year balance sheet should be positive, i.e. total assets less total outside Liabilities shall be positive.

**Requirement for various bidders will be as under:-**

<b>Single entity</b>	must meet requirement
<b>Joint Venture-</b>	
<b>All Partners Combined</b>	not applicable
<b>Each Partner</b>	must meet requirement
<b>Lead Partner</b>	must meet requirement



### **(B) Minimum Average Annual Turnover**

The bidder's income sheet should show Minimum Average Annual Turnover (MAAT) as **Rs.12 Crore** during the best 3 (three) years out of last 5 (five) years.

**Requirement for various bidders will be as under:-**

<b>Single entity</b>	must meet requirement
<b>Joint Venture-</b>	
<b>All Partners Combined</b>	must meet requirement
<b>Each Partner</b>	not applicable
<b>Lead Partner</b>	not applicable

### **(C) Availability of Financial Resources**

Bidder shall have Liquid Assets (L.A.)\* or / and evidence of access to or availability of fund based bank line of credit facilities to meet:

**(a) Rs. 3.00 Crore**

**And**

**(b) Total Monthly Financial Requirement for Current Contract Commitments**

**Note:** In case of JV, the Total Monthly Financial Requirement for Current Contract Commitments shall be evaluated in respect of Lead partner only.

**Requirement for various bidders will be as under:-**

<b>Single entity</b>	must meet requirement (a) and (b) above.
<b>Joint Venture-</b>	
<b>All Partners Combined</b>	must meet requirement
<b>Each Partner</b>	must meet 25% of the requirement (a) above
<b>Lead Partner</b>	must meet 50% of the requirement (a) and 100% of the requirement of (b) above

**Note:-** (i) Liquid Assets=Current Assets (-) Stock/Inventory (-) Prepaid Expenses (-) Contractual Advance Payments (+) Fund based unutilized bank line of credit.

(Bank certificate in the prescribed format shall be issued within 15 days prior to the date of opening of bid).

- (ii) Total Monthly Financial Requirement for Current Contract Commitments shall be submitted as per format of **Schedule-4(A)** duly certified by the Chartered Accountant.
- (iii) In case Prepaid Expenses and Contractual Advance payment liability is "NIL" then amount "0.00" may please be clearly filled in **Schedule-4(A)**.

**1.8.5 The Bidder through presentation shall have to arrange demonstration of the offered TAMS System for all its equipments and sub-system before opening of price bids.**

**1.9.0 VALIDITY OF OFFER: All Tenders are required to be kept valid for a period of 6 (six) months from the date of opening of Bids.** In case validity period is found to be short at the time of opening of Tender, all such Tenders may be rejected and returned. The MPPTCL reserves the right to forfeit the earnest money in case the tender is withdrawn after the opening date or in the event of refusal to accept the letter of intent placed by the Company within the validity period. The earnest money deposit will be refunded to the unsuccessful Bidders.

**1.9.1** While submitting the tender, it shall be ensured that the schedules are strictly in prescribed forms. The Bidder may use the original forms of schedules supplied with the tender specification or may use separate sheets.

**1.9.2 In any case, the "tender form" should be filled in original. The tenders should be completed with all schedules attached to the specification including the questionnaire, guaranteed particulars etc. This is very essential. The questionnaire should be answered in full otherwise the tenders are liable to be rejected.**

**1.9.3** The Bidders are requested to go through the specification schedules, notes and all enclosures carefully. Doubts if any should be got clarified well in time by writing to the Purchaser.

**1.9.4** The MPPTCL reserves the right (i) to reject any or all tenders or to accept any tender considered advantageous to the MPPTCL whether it is the lowest tender or not and (ii) to split the quantities against the tender on more than one firm for the same items/works. No reasons will be assigned by the Company for this and this will be binding on the Bidders.

**1.9.5** In case the date of opening of the tender is declared a holiday, the tenders will be received and opened on the following working day at the specified timings without any prior intimation.

**1.9.6** When tenders are delivered by special messenger, the same should be deposited in the office of CE(Procurement) on working days between **10.30 AM to 5.30 PM**. No-body is authorized to receive or grant receipt for tenders delivered by hand.

- 1.9.7** Telegraphic offers will not be considered. Tender received after specified time and date will not be considered and will be returned unopened. The Company will not be responsible for the postal delay in delivery of tender.
- 1.9.8** All tenders should be made out in English. Tenders if submitted in any other language must be accompanied by English translations.
- 1.9.9** Tenders should be furnished duly bound or firmly stitched in required copies. Each copy should be complete in all respects i.e. all enclosures should be attached separately with each copy. All pages/ pamphlets/ drawings/certificates should be numbered serially.
- 1.9.10** The Bidder or maximum two of his authorized representatives (having documentary evidence for such representation) may be present at the time of opening tender if they so desire.
- 1.9.11** POWER OF ATTORNEY: The Bidder may please note that notarized Power of Attorney regarding confirmation of authorization to sign on behalf of the Bidder should necessarily be submitted along with offer.
- 1.9.12** Erasers or other changes in the tender documents shall be over the initials of the person signing the tender.

#### **1.10.0 TECHNICAL PRESENTATION:**

As a part of the TENDER preparation process, bidders would be required to present their proposed solution to the MPPTCL. To facilitate a better understanding of proposed solution and other issues, a presentation including a structured walkthrough have been scheduled on the following lines. The presentation should be conducted as per the sequence outlined in this document. Handout material should be distributed (at least 2 copies) in addition to an electronic copy on a CD (2 no. copies). **The agenda of the presentation has been laid out below-**

##### **Section A:** General Information of the management (5 minutes)

- (1) Name of the primary Bidder and Single Point Interface for the Scheme of MPPTCL (1 slide).
- (2) Scope of Work (2 slide).
- (3) Roles & Responsibilities of all the consortium members (1 slide).

##### **Section B:** Structured Walkthrough of Proposed Approach and Methodology (30 minutes)

The purpose of the structured walkthrough is to get an insight into the Bidders understanding of the user requirements and assess the capability of the Bidder deliver the within the stipulated timeframe.

- (1) Understanding of Scope of Work of the Project & its requirements
- (2) Proposed approach and methodology to comprehensively address all the requirements the project laid out in the TENDER Milestones
- (3) Project Timelines and detailed project plan

- (4) Quality Control methodology, standards and quality assurance plan Capabilities
- (5) In terms of the human resources, and proposed manpower and experience that will be deployed for this project, should be mentioned broadly under the following heads:
  - (i) Domain Experts
  - (ii) Managerial Staff
  - (iii) Qualified Surveyors
- (6) The surveyors should have working knowledge of Madhya Pradesh.
- (7) The Bidders should also furnish the software and hardware details, that will be engaged in this project and present its live demonstration.

**Section C:** Miscellaneous (15 minutes): Questions & answers

**Section D:** Conclusive response from MPPTCL.

The presentations are expected to be concise and touch upon all the above sections & sub-Sections in the format and slide titles mentioned above. The presentation time should not exceed 45 minutes including Q & A.

**1.10.1** The Bidders should also furnish the software and hardware details, that will be engaged in this project.

### **1.11.0 BIDS EVALUATION AND QUALIFICATION METHODOLOGY:**

This being the turn key contract, based on the lowest evaluated cost based on QCBS (Quality and Cost Based System) and procedures described in this tender document, the contract would be awarded to the lowest substantially responsive bidder (responsive to qualifying criteria mentioned in **clause-1.8.0** above). The weightage of techno-Commercial and financial scores of bidders is proposed to be **70% and 30%** respectively. The minimum technical score required to pass is **70%**. If the bidder gets score of less than **70%**, their financial bid will not be opened and the same will be returned.

#### **1.11.1 Evaluation of Technical Proposal (QCBS)**

**1.11.1.1** The evaluation committee, appointed by the employer as a whole, and each of its members individually, evaluates the Bids (Tenders) on the basis of their responsiveness against qualification criteria to be satisfied, applying the evaluation criteria and marks system specified in the Marks Sheet. The evaluation committee shall compute the marks as per criteria for marks evaluation against Bidder's asset, Bidder's Credential and Bidder's Methodology, Work Plan and Organization Plan for each Bidder as per **Marking Sheet-1** and **Marking Sheet-2** and **Marking Sheet-3** respectively. Each responsive Bidder will be given a total technical score (**T<sub>b</sub>**) as per **Marking Sheet-4**. A proposal shall be rejected at this stage if it does not respond to important aspects of the qualification criteria to be satisfied or if it fails to achieve the minimum **technical score of 70%**. If the bidder gets score of **less than 70%**, their financial bid will not be opened and the same will be returned.

**1.11.1.2** The schedule date, time and place of opening of the financial bid will be communicated to the successful bidders who qualified in the technical Bids (Tenders). The Financial Bids shall be opened publicly in the presence of the contractors' representatives who choose to attend. The name of the contractor and the proposed prices shall be read aloud and recorded.

**1.11.1.3** After the evaluation of technical bid is completed, the employer shall notify those bidders whose bids did not meet the minimum qualifying mark or were considered non-responsive qualification criteria to be satisfied, indicating that their Financial Bid will be returned unopened after completing the selection process. The employer shall simultaneously notify the contractors that they have secured the minimum qualifying mark, indicating the date and time set for opening the Financial/Price Bid for which 7 days' notice will be given to the successful bidders of technical bid. The notification may be sent by registered letter, cable, telex, facsimile, or electronic mail.

**1.11.1.4 Technical Bid Evaluation Criteria:**

Technical Bid evaluation criteria for selection of agency for carrying out Geodetic Control Surveys by DGPS and developing using GIS & other software have been divided into 3 components and marks to be given under each of the evaluation criteria are as follows:

- i. The Bidder's Assets (equipment and technically qualified manpower): **45 Marks**
- ii. Bidder's Credentials (Turn Over & Work Experience): **45 Marks**
- iii. Work Plan and Methodology in response to the Terms of Reference: **10 Marks**

**1.11.1.5 Criteria for Marks evaluation against Bidder's Asset (Total Marks-45)**

**A. Instrument and Software : (Total marks-35)**

(regarding ownership, copy of invoice in case of local purchase, copy of bill of entry in case of import in the name of agency to be enclosed)

**a) DGPS (Dual frequency, at least 50 channel and above), Minimum 16 Nos. -Total marks-17**

- i. Minimum 12nos (own)+4(hire), **Marks- 12**
- ii. Minimum 16nos. (own), **Marks - 17**

**b) Auto Level/Digital Level (Minimum 4 nos.)(own)- Total marks- 3**

**c) Computers (minimum 4 nos., own) Normal speed processing computer having minimum " i7 " processor, 8 GB RAM, 4 GB Graphics Cards - Total marks- 5**

**d) GNSS post processing Software for base line and network adjustment - Total marks - 5**

- i) 01 no. own by agency, **Marks- 3**

ii) More than 01 no. own by agency, **Marks-5**

**e) Software GIS system & mapping software - Total marks - 5**

i) 01 no. own by agency, **Marks- 3**

ii) More than 01 no. own by agency, **Marks-5**

**B. Manpower: (Total marks – 10)**

**a)** Minimum employee on regular payroll should be **12**, among them **at least 2 should be Graduate Engineer/Science Graduate** and at least 10 should be Diploma in Civil Engineering/Surveyor/ITI plus 4 can be hired Diploma in Civil Engineering/Surveyor/ITI (copy of pay slip, bank statement and qualification certificates to be enclosed) - **Marks - 8**

**i) One Sr. Professional:** Graduate in Civil Engineering/Surveying and Mapping/Science Graduate/or any other engineering with minimum of **10 years experience** in DGPS and Survey works.

**ii) Six Professionals:** Diploma in Civil Engineering/Surveyor/ITI with minimum of **5 years experience** in DGPS and Survey work.

**iii) Seven Survey Technicians:** Minimum Diploma in Civil Engineering/Surveyor/ITI with minimum of **2-years experience** in Survey works

**b)** Additional **3** employees: 1 on pay roll+2 hire, Minimum Diploma Civil Engineering/Surveyor/ITI/Science Graduate or any other engineering of **2-years experience** in Survey works–**Marks- 10**

**Note:** For proof of employee on regular roll, copy of PF statement/copy of bank statement showing salary transfer to bank and CV including qualification certificates to be enclosed.

**1.11.1.6 Criteria for Marks evaluation against Bidder's Credential (Total Marks-45)**

**A. Company Registration (Total Mark-3)**

(copy of registration certificate to be enclosed)

a) Minimum 03 years old from the date of opening of tender -**Marks -2**

b) More than 04 years old from the date of opening of tender -**Marks -3**

**B. Minimum Average annual turn over of last three financial year (Total Marks-10)**

a. More than ₹12 Cr (100% of the Requirement) **-Marks - 8**

b. More than 125% of the Requirement **- Marks - 9**

c. More than 150% of the Requirement **–Marks-10**

**C. Liquid Assets (Total Marks-5)**

a. More than ₹3.00 Cr (100% of the Requirement ) -**Marks - 3**

b. More than 125% of the Requirement **- Marks –4**

c. More than 150% of the Requirement **–Marks-5**

#### **D. Work Experience (Total Marks – 27)**

**a) Similar work** of DGPS Survey and implementation of Geographical Information System **in last five financial year: (Total marks-10)**

- i) Single work more than ₹12 Cr and less than ₹ 14 Cr **Marks –7**
- ii) Single work **more than** ₹ 14 Cr and less than ₹ 16 Cr - **Marks - 8**
- iii) Single work **more than** ₹ 16 Cr – **Marks- 10**

**b) One year performance of work** during the **last 5 years. (Total marks- 7)**

- i) Single work more than ₹12 Cr and less than ₹ 14 Cr -**Marks - 5**
- ii) Single work more than ₹14Cr–**Marks- 7.**

**c) Similar work** of DGPS Survey and implementation of Geographical Information System **in last five financial year executed by key personnel. (Total marks- 10)**

- i) One Sr. Professional having experience of two similar projects-**Marks-6**
- ii) Two Professional each having experience of one similar projects-**Marks-4**

#### **Notes:**

- While evaluating above requirement, single work of highest value shall only be considered for evaluation.
- A weightage of 10% (compounded annually from the date of completion of the work to the submission of the Bid) shall be given for equating the value of works of the previous years to the current year.
- Only such works shall be considered where physical completion of entire work is over or commissioning of work has been done, whichever is earlier.

#### **1.11.1.7 Criteria for marks evolution against Bidder's Methodology, Work Plan and Organization and Staff Plan (Total Marks-10)**

- a) Company Methodology - Marks-2
- b) Company Work Implementation Plan - Marks-3
- c) Company Organization and Staff Plan - Marks- 2
- d) Live demonstration of Applications for presenting- Marks- 3  
operational speed, user-friendly, Limitations, etc.

#### **1.11.1.8 Financial Proposal / Price bids evaluation:**

- i) The bidders may specifically note that price evaluation will be done on the basis of prices indicated in Schedule-I comprising of following:
  - a. Total Price including Goods and Services Tax of Equipments and materials, & software to be supplied for TAMS system for SLDC,

Transmission Control Centre and at EHV substations as per Schedule-I (A).

- b. Total Price including Goods and Services Tax for Installation, Erection, Testing, including Commissioning and implementation of TAMS system as per Schedule-I (B).
  - c. AMC for 5 years as indicated in Schedule-I (C).
- ii) **The Financial Bid shall be opened publicly in the presence of the contactors representatives who choose to attend. The name of the contractor, the technical scores, and the proposed prices shall be read aloud and recorded when the Financial Bids are opened.**
  - iii) Arithmetic errors will be rectified on the following basis. If there is a discrepancy between the unit price and the total price, which is obtained by multiplying the unit price and quantity, or between subtotals and the total price, the unit or subtotal price shall prevail, and the total price shall be corrected. If there is a discrepancy between words and figures, the amount in words will prevail. The subtotal, total price or the total bid price, irrespective of the discrepancy between the amount indicated in words or price shall be rectified in line with the procedure explained above. If the bidder does not accept the correction of errors, its bid will be rejected and the amount of bid security forfeited.
  - iv) Evaluators of Technical Proposals shall have no access to the Financial Proposals until the technical evaluation is concluded and the same is approved by the competent authority.
  - v) Based on the results of the Technical evaluation Employer will then proceed to open and evaluate the financial proposal of the technically acceptable Bidders. The financial evaluation will take into account the information supplied by the Bidders in their financial proposal.
  - vi) The bidder with lowest project cost (amongst the techno-commercially qualified bidders) will be designated as (**L<sub>1</sub>**) and **in this QCBS tendering system, the lowest Financial Bid will be given a financial score (F<sub>min</sub>) of 100 marks.**
  - vii) Financial Scores for other techno-commercially qualified bidders will be evaluated using the following formula detailed below:

$$\text{Financial Score of Bidder (F}_s\text{)} = \left( \frac{\text{Project Cost of L}_1}{\text{Project Cost of the Bidder}} \right) \times 100 \text{ (rounded off to 2 decimal places)}$$

### **1.12.0 AWARD CRITERIA:**

**1.12.1** The evaluation of this proposal will be based on QCBS (Quality and Cost Based System) which is at a rate of 70:30 on Techno-Commercial & Financial scores, respectively. **Scores of the Financial evaluation would be weighed prorate on a scale of 30 with the Bidder with lowest Financial quote getting 30.** These Financial scores would then be added up with the score of the Technical evaluation and the Bidder getting the maximum total score out of 100 would be considered as the successful bidder. The bidder with highest composite score may be called for negotiations, if required.

**1.12.2** Formula for Final Bid Evaluation will be as follows:



$$M_b = 0.7 \times (T_n) + 0.3 \times (F_n)$$

$$F_n = (F_{\min} / F_b) \times 100$$

$$T_n = (T_b / T_{\max}) \times 100$$

Where

$M_b$  is Total marks of the bidder in consideration

$T_{\max}$  is the maximum technical score of any bidder

$T_n$  is Normalized Techno Commercial Marks of the bidder in consideration

$T_b$  is the Evaluated technical Commercial score of the bidder

$F_n$  is Normalized Financial score of the bidder in consideration

$F_b$  is the Evaluated Cost of the bidder in consideration

$F_{\min}$  is the Minimum evaluated cost of any bidder

### 1.12.3 Composite score based on Final Bid Evaluation:

Name of Bidder	$T_b$	$T_{\max}$	$T_n$	$F_b$	$F_{\min}$	$F_n$	$M_b = (0.7 \times T_n) + (0.3 \times F_n)$
<b>Bidder 1</b>							
<b>Bidder 2</b>							
<b>Bidder 3</b>							

### 1.12.4 All evaluations will be rounded off to 2 decimal places only.

- i. In case of equal composite score obtained by multiple bidders, the organizations with the lowest Financial quote (i.e. highest financial score) will be considered and declared as the successful bidder.
- ii. MPPTCL reserves the right to negotiate with the Bidder whose proposal has been ranked first on the basis of best value.
- iii. **L<sub>1</sub> bidder** would be selected through QCBS method as mentioned in this RFP. The contractor achieving the highest **composite** technical and financial score will be awarded.

### 1.13.0 PARTICIPATION ON JOINT VENTURE' BASIS:

Offers on 'Joint venture' Basis shall be acceptable. 'Joint venture' may be formed of a maximum of not more than FOUR partners. The Bidders will have to comply with the conditions described hereunder:-

- (i) An agreement (Format-1 for undertaking by JV Partners) shall be signed which shall be legally binding on all partners.

- (ii) One of the partners shall be nominated as lead partner and the lead partner shall be authorized to incur liabilities and receive instructions for and on behalf of any and all partners of the joint venture, and the entire execution of the contract, including payment, shall be done exclusively with the lead partner, provided otherwise requested by the joint venture and agreed between the MPPTCL and the lead partner. The authorization shall be evidenced by submitting a Power of Attorney signed by legally authorized signatory of all the partners as per enclosed Format-2.
- (iii) All partners of the joint venture shall be liable jointly and severally for the execution of the Contract in accordance with the Contract terms and a statement to this effect shall be included in the authorization mentioned under(ii)above.
- (iv) An agreement for authorizing one partner to act as Lead partner in prescribed format (format of power of attorney for Joint Venture) enclosed as Format-3 should be provided with the bid.
- (v) It would be essential for the Lead Partner to sign each & every document of the bid submitted. Signature by any other JVA partners on the basis of Power of Attorney shall not be accepted.
- (vi) Once contract is awarded on a company participating as Joint Venture concern, it may be explicitly noted that lead partner of the Joint Venture after award of contract shall not be permitted to change his status or any of the responsibilities on the basis of which the lead partner of Joint Venture has participated against bid invitation(Format 1, 2 & 3).

#### **1.14.0 DETAILS OF DOCUMENTS TO BE SUBMITTED::**

**1.14.1** Following standard online formats are required to be filled in:

- (i) Details related to EMD (in **Envelope 'A'**)
- (ii) Check list as per **schedule -7**.
- (iii) Schedule-1 Prices and quantity (in **Envelope 'C'**).

**1.14.2** All other documents alongside hard copy for uploaded EMD/tender cost/checklists are required to be submitted as attached with this bid document to participate in the bidding process as detailed below:

- (i) EMD
- (ii) System generated receipt for online payment made towards Tender Cost.
- (iii) Tender form.
- (iv) Audited Statements for last three years.
- (v) Schedule-2 Commercial Questionnaire
- (vi) Schedule-3 Details of past work.
- (vii) Schedule-4(A) Financial information of the bidder
- (viii) Schedule-4(B) Bank certificate.
- (ix) Schedule-4(C)Details of survey works of EHT lines which are under execution
- (x) Schedule 5 Details of HQ field organization
- (xi) Schedule-6 T&P and vehicles available with Bidder.

(xii) Schedule 7 Check list

**1.14.3** The hard copies (one set) of all the documents listed above except Price bid (Schedule-1) duly signed with seal of Bidder shall be submitted within specified time schedule as mentioned in Key Dates.

**1.14.4** Bidder intending to participate in that tender are required to get themselves trained on e-procurement system. The Bidder are required to contact the service provider M/s Tata Consultancy Service Limited may be contacted on Toll Free No: 1800-2588-684 for all enquires, clarification etc., if any related to e-tendering.

### **1.15.0 Corrupt and Fraudulent Practices**

Employer requires that bidders, suppliers, and contractors observe the highest standard of ethics during the procurement and execution of contracts. In pursuance of this policy, the Employer defines, for the purposes of this provision, the terms set forth below as follows:

“corrupt practice” means the offering, giving, receiving, or soliciting, directly or indirectly, anything of value to influence improperly the actions of another party;

“fraudulent practice” means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;

“coercive practice” means impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;

“collusive practice” means an arrangement between two or more parties designed to achieve an improper purpose, including influencing improperly the actions of another party;

“obstructive practice” means (a) deliberately destroying, falsifying, altering or concealing of evidence material to a Employer’s investigation; (b) making false statements to investigators in order to materially impede a Employer’s investigation; (c) failing to comply with requests to provide information, documents or records in connection with an investigation; (d) threatening, harassing, or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation, or (e) materially impeding Employer’s contractual rights of audit or access to information.

will reject a proposal for award if it determines that the bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract.

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## **SECTION-II**

### **GENERAL CONDITIONS OF CONTRACTS**

#### **2.01 DEFINITION OF TERMS**

In construing these general conditions and the annexed specification, the following words shall have the meanings herein assigned to them unless there is something in the subject or context inconsistent with such construction :-

(i) The `MPPTCL' shall mean the Madhya Pradesh Power Transmission Company Limited (MPPTCL), Jabalpur and include his successor in office and permitted assigns/authorised representative.

(ii) The `Contractor' shall mean the Bidder whose tenders shall be accepted by the MPPTCL and shall include the Bidder, heirs, executors, administrators, representative and assigns.

(iii) The `sub-contractor' shall mean the person names in the contract for any part of the work or any person to whom any part of the contract has been sublet with the consent in writing of the engineers and the heirs, executors, administrators, representative and assigns of such person.

(iv) The `Engineer' shall mean the Chief Engineer, Power Transmission Company Limited or such other officer as may be duly authorised and appointed in writing by the MPPTCL to act as Engineer for the purpose of the contract. In cases where no such Engineer has been so appointed, the work "Engineer" shall mean the MPPTCL or his duly authorised representatives.

(v) Plant, work or works shall mean and include plant and materials to be provided and work to be done by the contractor under the contract.

(vi) The `contract' shall mean and include the general conditions, specification, schedules, drawings, form of tender, covering letters schedule of prices or the final general condition, any special conditions applying the particulars contract specification, and drawings and the agreement to be entered into under clause 3 of these general conditions.

(vii) The `Specification' shall mean the specification annexed to these general conditions and the schedules there to (if any).

(viii) The `Site' shall mean the site of the proposed plant/line/sub-station where work is to be executed under the contract.

(ix) `Test of Completion' shall mean such tests as prescribed by the specification to be made by the contractor before the work is taken over by the MPPTCL.

(x) `Commercial Use' shall mean that use of the work which the contract contemplates or of which it is to be commercially capable.

- (xi) `Month' shall mean calendar month.
- (xii) `Writing' shall include any manuscript, type written or printed statement, under or over signature or seal as the case may be.
- (xiii) `Line' shall mean transmission line.
- (xiv) `Approved' or `To approval' shall mean as approved by or approval of the Engineer or MPPTCL.
- (xv) Words importing, persons shall include firms, companies, corporations, and other bodies whether incorporated or not.
- (xvi) Words importing the singular only shall also include the plural and vice versa when the context requires.
- (xvii) "Project Cost" means total evaluated cost of the project including annual maintenance charges as per Schedule-I.
- (xviii) "Notification of Award/ Letter of Intent" the MPPTCL shall notify the successful Bidder, in writing, that its bid has been accepted and until a formal contract/ order is prepared and executed, the notification of award/ letter of intent shall constitute a binding contract.
- (xvix) "Effective Date" means the date of notification of award.

## **2.02 CONTRACTOR TO INFORM HIMSELF FULLY :**

The contractor shall be deemed to have carefully examined the general conditions of specification, schedules and drawings. If he shall have any doubt as to the meaning of any portion of these general conditions or of the specification he shall before signing the contract set forth the particulars thereof, and submit them to the Engineer in writing, in order that such doubt may be removed.

## **2.03 CONTRACT, AGREEMENT AND SECURITY DEPOSIT :**

**2.3.1** The contractor shall execute an agreement in the prescribed format on a non-judicial stamp paper of appropriate value affixed with revenue stamp within 28days from the date of issue of Notification of Award. The format of the agreement is enclosed. The cost of the stamps shall be borne by the contractor. If the contractor fails to execute the agreement within the stipulated period, then contract awarded shall be liable for cancellation without any liability on the MPPTCL.

**2.3.2** Bidders may please note that 10% security deposit shall be submitted within 28days from the date of the date of issue of NOA for performance guarantee of equipments and faithful performance of contract. This is a mandatory requirement and if the successful Bidder fails to submit the Security Deposit for 10% value of order, the purchaser shall take action against the Bidder as per terms of order which may include invoking risk purchase clause of the order. The supplier has to furnish security deposit in form of Bank Guarantee.

2.3.3 This security deposit shall be retained till the completion of contract including AMC. After successful completion of Defect liability period, the amount of security deposit bank guarantee will be reduced to the amount corresponding to 10% value of the Annual Maintenance Contract.

**2.3.5** If successful Bidder fails to enter into formal agreement and deposit the security deposit within 28(Twenty Eight) days from the date of issue of NOA, the Company shall have the option to cancel the contract.

#### **2.04 SUB-LETTING OF CONTRACT :**

It is not expected that the work under the contract will be sub-letted. The contractor shall not, without the consent in writing of the Engineer or MPPTCL, which shall not be unreasonably withheld, assign or sub-let his contract, or any substantial part thereof, other than for minor part or for any part of the work . Contractor shall submit the information about the sub-contractor if any to whom the contractor intends to sub-contract, part of the work and extent of such work. Prior sanction of the MPPTCL shall be obtained in subletting of contract. Approval from the MPPTCL for sub-contracting/ subletting part of the work shall not relieve contractor from any of his obligation or responsibility under this contract.

#### **2.05 PATENT RIGHTS :**

The MPPTCL has complete rights over the design and drawings of towers and foundations and is their sole proprietor. The contractor shall not copy or use these for any purpose other than erection of the line for which the work contract is awarded to him by the MPPTCL.

#### **2.06 POWER TO VARY OR OMIT WORKS :**

No alternations, amendments, omissions, additions, suspensions or variations of the work (hereinafter referred to as "variations") under the contract as shown by the contract drawings on the specification shall be made by the contractor except as directed in writing by the Engineer, but the Engineer shall have full power, subject to the provision hereinafter contained, from time to time during the execution of the contract, by notice in writing to instruct the contractor to make such variations without prejudice to the contract and the contractor shall carry out such variations and be bound by the same conditions, as far as applicable as though the said variations occurred in the specification. If any suggested variations would in the opinion of the contractor, if carried out prevent him fulfilling any of his obligations or guarantees under the contract, he shall notify the Engineer thereof in writing and the Engineer shall decide forthwith whether or not the same shall be carried out and if the Engineer confirms his instructions, the contractor's obligations and guarantees shall be modified to such an extent as may be justified. The difference of cost if any occasioned by any such variations shall be added to or deducted from the contract price as the case may require. The amount of such difference, if any shall be ascertained and determined in accordance with the rates specified in the schedules of prices so far as the same may be applicable, and where the rates are not contained in the said schedules, or are not possible, they shall be settled by the Engineer and contractor jointly. But the MPPTCL shall not become liable for the payment of any

charge in respect of any variations, unless the instruction for the performance of the same shall have been given in writing by the Engineer.

In the event of the Engineer requiring any variations, such reasonable and proper notice shall be given to the contractor as will enable him to make his arrangements accordingly and in cases where work done that require to be altered, a reasonable sum in respect thereof shall be allowed by the Engineer. Provided however, that no variations which involves an increase of the total price payable hereunder be more than 20 percent shall be made without the previous consent in writing of the contractor.

In any case in which the contractor has received instructions from the Engineer as to carry out the 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 the instructions aforesaid, advise the Engineer to that effect.

## **2.07 NEGLIGENCE :**

If the contractor shall neglect to execute the work 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 connection with the work, or shall contravene the provisions of the contract, the MPPTCL may give seven days notice in writing, to the contractor to make good the failure, neglect, or contravention complained of and should the contractor fail to comply with the notice within a reasonable time from the date of service thereof in the case of a failure, neglect, or contravention capable of being made good within that time, or otherwise within such time as may be reasonably necessary for making it good, then and in such case the MPPTCL shall be at liberty to employ other workmen and forthwith perform such work as the contractor may have neglected to or if the MPPTCL shall think fit, it shall be lawful for him to take the work wholly, or in part, out of contractor's hands and re-contract at a reasonable price with any other persons or provide any other materials, tools, tackle or labour for the purpose of completing the work or any part thereof and in that event the MPPTCL shall without being responsible to the contractor for fair wear and tear of the same have the free use of all the materials, tools, tackle, construction plant or other things which may be on the site, for use at any time in connection with the work, to the exclusion of any right of the contractor over the same and the MPPTCL shall be entitled to retain and apply and balance which may be otherwise due on the contract by him to the contractor or such part thereof as may be necessary, to the payment of the cost of executing such work as aforesaid.

In case work is not completed by the contractor within the completion period or extended period if any, or any failure to complete the work or neglect the work etc. noticed, MPPTCL may at its option can get the work done through some other agency at the cost and risk of the contractor or complete the balance work done departmentally and recover the expenditure so incurred from the contractor or terminate the order without any liability on either side.

If the cost of executing the work as aforesaid shall exceed the balance due to the contractor, and the contractor fails to make good the deficit, the said materials, tools, tackle, construction plant or other things, the property of the



contractor may be sold by the MPPTCL and proceeds applied towards the payment of such difference and the cost of any incidental to such sale. Any outstanding balance existing after credition the proceeds of such sale shall be paid by the contractor on the certificate of the Engineer but when all expenses cost and charges incurred in the completion of the work are paid by the contractor all such materials, tools, construction plant or other things remaining unsold shall be removed by the contractor.

## **2.08 DEATH BANKRUPTCY ETC.**

If the contractor shall die or commit any act of bankruptcy or being a corporation, commerce to be wound-up for reconstruction purposes or carry on its business under a receiver, the executors, successors, or representatives in law of the estate of the contractor any such receiver, liquidator or any person in whom the contract may become vested, shall forthwith give notice thereof in writing to the MPPTCL and shall for one month during which he shall take all responsible steps to prevent a stoppage of the works have to option of carrying out the contract subject to his or their providing such guarantee as may be required by the MPPTCL but not exceeding the value of the work for the time being remaining unexecuted. In the event of stoppage of the works, the period of the option under this clause shall be fourteen days only, provided that should be above option not be exercised, the contract may be terminated by the MPPTCL by notice in writing to the contractor, and the same power and provisions reserved to the MPPTCL in the last preceding clause on the taking of the work out of the contractor's hands shall immediately become operative.

## **2.09 INSPECTION :**

The Engineer and his duly authorised representatives, shall have at all reasonable times access to the contractors premises or works, and shall have the power at all reasonable times, to inspect survey work for which all the reasonable necessary assistance shall be rendered by the contractor without any extra commitment.

The Engineer shall on giving seven days notice in writing to the contractor setting out any grounds of objection which he may have in respect of the work, be at liberty to reject all or any part of the work or workmanship the subject of any of the said grounds of objection, which in his opinion are not in accordance with the contract or are in his opinion defective for any reason whatsoever. Such noticeshall be sent to the contractor within reasonable time after the grounds upon which such notice is based have come to the knowledge of the Engineer.

## **2.10 WORK ON SITE:**

Suitable access to and possession of the site shall beafforded to the contractor by the purchaser in reasonable time. In case of day to day problem if faced for execution of work covered in scope of this tender free access to the site and other local problem the same would be solved by the contractor. However, the purchaser would extend necessary co-operation/assistance in this respect. The necessary road permits required for transportation of men/material would be arranged by the contractor at his own cost.

In the execution of the work, no persons other than the contractor, or his duly appointed representatives, approved sub-contractors and workmen shall be allowed to do works on the site except by the special permission, in writing of the Engineer or his representative. The access to the works at all times shall be accorded to the Engineer and his representative and other authorised officials or representatives of the MPPTCL.

Nevertheless, the contractor shall permit the execution of work by other contractors or tradesmen whose names shall have been previously communicated in writing to the contractor by the Engineer and afford them every facility for the execution of their several works, simultaneously with his own. The contractor shall provide all the skilled and unskilled labour necessary for the erection of work included in the contract.

### **2.11 CONTRACTOR'S REPRESENTATIVE AND WORKMAN :**

For supervision of survey work of line, the contractor shall employ at least one Supervisor who will be overall in charge of the work.

In case the contractor desires to replace the "In charge of work", he has to obtain written permission giving full particulars of the person to be engaged along with his signature attested by them. No other persons except the in charge of work shall be allowed to sign the related documents.

The Engineer shall be at liberty to object to any representative or person employed by the contractor in the execution of or otherwise about the works who shall misconduct himself or be incompetent or negligent and the contractor shall remove the person so objected upon receipt from the Engineer of notice in writing required him so to do and shall provide in his place a competent representative at the contractor's expense.

### **2.12 LIABILITY FOR ACCIDENTS AND DAMAGE:**

The contractor shall, during the progress of the survey work, take proper precaution against accident or injury to the same from any cause and shall be and remain answerable and liable for all accidents or injury to the same from any cause thereto which until the same be or be deemed to be taken over under clause of this specification may arise or be occasioned by the acts or omission of the contractor or his workmen or sub-contractor, and all losses and damages to the line arising from such accidents and injuries as aforesaid shall be made good in the most complete and substantial manner by and at the sole cost of the contractor and to the reasonable satisfaction of the Engineer.

Provided that the contractor shall not be liable under the contract for any loss or profit or loss of contract or any claims made against the MPPTCL not already provided for in the contract, nor for any damage or injury caused by or arising from the acts of the MPPTCL or due to circumstances over which the contractor has no control, nor shall his total liability for loss, damage or injury exceed the total value of the contract.

The contractor shall be deemed to have indemnified and saved harmless the MPPTCL against all actions, suits, claims, demands, cost or expenses arising in connection with injuries suffered prior to the date when the plant shall have been

taken over under clause of this specification herein by persons employed by the contractor or his sub-contractor on the works whether under the General Law or under the Workmen's Compensation Act, 1923 or any other statute in force at the date of the contract dealing with the question of the liability of employers for injuries suffered by employees and to have taken steps properly to insure against any claim thereunder.

On the occurrence of an accident which results in the death of any of the workmen employees by the contractor or which is so serious as to be likely to result in the death of any such workmen, the contractor shall, within 24 hours of the happening of such accident intimate in writing to the concerned Engineer of the Electricity MPPTCL the fact of such accident.

The contractor shall indemnify the MPPTCL against all loss or damage sustained by the MPPTCL resulting directly or indirectly from his failure to give intimation in the manner aforesaid including the penalties or fines if any payable by the MPPTCL as a consequence of MPPTCL's failure to give notice under the Workmen's Compensation Act or otherwise to confirm to the provisions of the said Act in regard to such accident.

In the event of any claim being made or action brought against the MPPTCL involving the contractor and arising out of the matters referred to and in respect of which the contractor is liable, under this clause, the contractor shall be immediately notified thereof and he shall, with the assistance if he so require of the MPPTCL, at the sole expense of the contractor, conduct all negotiations for the sole settlement of the same or of any litigation that may arise therefrom. In such case the MPPTCL shall, at the expense of the contractor, afford all available assistance for any such purpose.

### **2.13 DEDUCTIONS FROM CONTRACT PRICE :**

All costs, damages or expenses which the MPPTCL may have paid for which under the contract the contractor is liable may be deducted by the MPPTCL from any money due or becoming due by him to the contractor under the contract or may be recovered by action at law or otherwise from the contractor as an arrear of land revenue.

### **2.14 CERTIFICATE NOT TO AFFECT RIGHTS OF THE MPPTCL OR CONTRACTOR**

No certificate of the Engineer on account, nor any sum paid on account by the MPPTCL, nor any extension of time for the execution of the works by the contractor under prejudice the rights of the MPPTCL against the contractor or relieve the contractor of his obligations for the due performance of the contract, or be interpreted as approval of the work done and no certificate shall or liability in the MPPTCL to pay for alterations, amendments, variations or additional work not ordered in writing by the Engineer or discharge the liability of the contractor for the payment of damages whether due, ascertained, or certified or not or of any sum against the payment of which he is bound to indemnify the MPPTCL nor shall any such certificate nor the acceptance by him of any such paid on account of otherwise affect or prejudice the rights of the contractor against the MPPTCL.

## **2.15 TERMINATION OF CONTRACT ON EMPLOYER'S INITIATIVE**

The Employer reserves the right to terminate the contract either in part or in full due to reasons other than those mentioned under clause entitled NEGLIGENCE. The Employer shall in such an event give fifteen (15) days notice in writing to the Contractor of his intention to do so. 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 contract to the extent they are related to the work terminated and terms satisfactory 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.

In the event of such termination, after commencement of work, the Contractor shall be paid only the charges at accepted rate given in contract for actual work done and no other compensation shall be payable by the Employer.

## **2.16 REJECTION OF DEFECTIVE WORK :**

If the complete work or any portion thereof before it is taken over under clause of this specification be defective, or fails to fulfill the requirements of the contract, the Engineer shall give the contractor notice setting forth particulars of such defects or failure, and the contractor shall forthwith make the defective work good, or later the same to make it comply with the requirements of the contract. Should he fails to do so within a reasonable time, the MPPTCL may reject and replace at the cost of the contractor, the whole or any portion of the work as the case may be, which is defective or fails to fulfill the requirements of the contract, such replacement shall be carried out by the MPPTCL within a reasonable time, and at a reasonable price and where reasonable possible, to the same specification and under competitive conditions. The contractor's full and extreme liability under this clause shall be satisfied by the payment to the MPPTCL of the extra cost, if any, of such replacement delivered and/or erected as provided for in the original contract, such extra cost being the ascertained difference between the price paid by the MPPTCL under the provisions above mentioned for such replacement and the contract price for the work so replaced and the replacement of any sum paid by the MPPTCL to the contractor in respect of such defective work should the MPPTCL not so replace the rejected plant within a reasonable time the contractor's full and extreme liability under this clause shall be satisfied by the repayment of all money paid by the MPPTCL to him in respect of such plant.

## **2.17 TAKING OVER:**

The work shall be accepted and taken over when it has been satisfactorily completed in all respect.

## **2.18 RESPONSIBILITY OF CONTRACTOR :**

The contractor shall be responsible for carrying out the works covered under the scope of the contract according to the specifications/order. For example all the work of detailed survey should be done according to the specification / order

## **2.19 EXTENSION OF TIME FOR COMPLETION :**

The time for completion starts from date of Notification of award i.e. effective date. If the work delayed at any time during the term or extended terms of this contract by strikes, lockouts, fire, accident or any cause whatsoever beyond the control of the contractor a reasonable extension of time shall be granted as may be mutually agreed upon. The request for such extensions should be made in writing to the MPPTCL immediately after the occurrence alongwith the cause of delay supported by documentary proofs. In absence of such details, the case for extension in completion period shall not be considered.

## **2.20 DAMAGES FOR DELAY IN COMPLETION :**

**2.22.1** The time for completion of work as stipulated shall be deemed to be the essence of the contract. In case of delay in execution of the order, the Company may at its option either (i) recover from the supplier/contractor a sum of 1/2% (half percent) of the total cost (i.e equipment/material and Installation & Commissioning cost) of work not executed per week or part thereof up to a maximum of 10% (ten percent) of the contract price or (ii) purchase the same elsewhere on account and at the risk of the supplier/ contractor or others of similar descriptions or (iii) cancel the contract.

**2.22.2** In case of delayed completion of work, the purchaser may at his option impose a penalty calculated at the above rate for such site which cannot be put to use for which it was meant as a consequence for such delay.

**2.22.3** In case any of the equipment/ material is found to be defective in materials of workmanship or develops defects during service, same shall be replaced/ repaired by the supplier free of all charges within 30 days or within reasonable period as per specific agreement with order placing authority from the date of receipt of intimation. In case of delay in replacement/ repair of equipment, the MPPTCL may at its option recover penalty @ 0.5% of ex-works price for each week or part thereof subject to a maximum of 10%

## **2.21 REGULATIONS OF LOCAL AUTHORITIES :**

The MPPTCL shall through-out the continuance of the contract and in respect of all matters arising in the performance thereof serve all notices and obtain consents, way leaves, approvals and permissions required in connection with the regulations and byelaws of the local or other authority which shall be applicable to the works. However the contractor shall obtain all necessary licenses/ permissions as per Central/State/Local statutory bodies at his cost.

All works shall be executed in accordance with the Indian Electricity Rules, 1956 and any statutory modifications thereof/Electricity Act 2003, wherever they are applicable, unless otherwise agreed to in writing by the Engineer.

## **2.22 DEFECT LIABILITY**

2.22.1 The contractor warrants that the facilities or any part thereof shall be free from defects in the design, engineering, materials and workmanship of the Plant supplied and of the work executed.

2.22.2 The Defect Liability Period in respect of the facilities (or, where Operational Acceptance of any part of the Facilities occurs, of such part) shall commence upon the date of Operational Acceptance and expire twenty four (24) months thereafter.

If during the Defect Liability Period any defect should be found in the design, engineering, materials and workmanship of the Plant supplied or of the work executed by the Contractor, the Contractor shall promptly, in consultation and agreement with the Employer regarding appropriate remedying of the defects, and at its cost, repair, replace or otherwise make good as the Contractor shall determine at its discretion, such defect as well as any damage to the Facilities caused by such defect. The Contractor shall not be responsible for the repair, replacement or making good of any defect or of any damage to the Facilities arising out of or resulting from any of the following causes:

- (a) Improper operation or maintenance of the Facilities by the Employer;
- (b) operation of the Facilities outside Specifications provided in the Contract; or
- (c) Normal wear and tear.

## **2.23 ARBITRATION :**

If at any time any question, dispute or difference whatsoever shall arise between the purchaser/ MPPTCL the engineer and the contractor upon or in relation to, or in connection with the contract, either party may forthwith give to the other notice in writing of the existence of such question, dispute or difference and the same shall be referred to the adjudication to the MD, MPPTCL, or to any other person nominated by him in his behalf and his decision in writing shall be final and binding on the contractor / Engineer and conclusive. This submission shall be deemed to be a submission to arbitration within the meaning of the Indian Arbitration Act, or any statutory modification thereof. Upon every or any such reference, the cost of an incidental to the reference and award respectively shall be in the discretion of the arbitrator who may determine the amount thereof, or direct the same to be taxed as between solicitor and client or as between party and shall direct by whom and in what manner the same shall be borne and paid.

Work under the contract shall be continued by the contractor during the arbitration proceedings unless otherwise directed in writing by the purchaser or the engineer or unless the matter is such that the work can not possibly be continued until the decision of the arbitrator is obtained and except as those which are otherwise expressly provided in the contract no payment due or payable by the purchaser shall be withheld on account of such arbitration proceeding unless it is the subject matter or one of the subject matter thereof.

In case of any dispute the law applicable shall be the law in force in India. The Courts of Jabalpur shall have exclusive jurisdiction in all matters of disputes.

## **2.24 CONTRACT :**

The contract shall in all respects be construed and operated as a contract as defined in the Indian Contract Act, 1972 and all payments thereunder shall be made in rupees unless otherwise specified.

## **2.25 HEADINGS :**

The subject heading of any clause hereof shall not in any manner whatsoever, affect the interpretation of such clause.

## **2.26 LABOR LAWS**

(a) The Contractor shall comply with all the relevant labor Laws applicable to the Contractor's Personnel, including Laws relating to their employment, health, safety, welfare, immigration and emigration, and shall allow them all their legal rights.

(b) The Contractor shall at all times during the progress of the Contract use its best endeavors to prevent any unlawful, riotous or disorderly conduct or behavior by or amongst its employees and the labor of its Subcontractors.

(c) The Contractor shall, in all dealings with its labor and the labor of its Subcontractors currently employed on or connected with the Contract, pay due regard to all recognized festivals, official holidays, religious or other customs and all local laws and regulations pertaining to the employment of labor.

(d) If the Contractor propose to use contract labour for carrying out various installation activities, necessary permission as per Contract Labour (Regulation & Abolition) Act 1970, Article 12 D (1) may please be obtained from Labour, Commissioner, and submitted to the Order Placing Authority.

(e) It may explicitly be noted by the Contractor that any cost to be incurred by the employer due to default in compliance of minimum wage, EPF act provisions or any other act related to wages, the same shall be recovered from Contractor.

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<b>3.03</b>	PRICES AND QUANTITIES
<b>3.04</b>	RATES
<b>3.05</b>	IDLING CHARGES
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## **SECTION-III**

### **COMMERCIAL TERMS AND CONDITIONS**

#### **3.01 SCOPE:**

Survey of various transmission lines using DGPS/GPS for collecting Geo-reference data, Geo-coding, Geo-referencing, GIS mapping, integration on software which consists of capturing, storing, checking, integrating, manipulating, analyzing and displaying present spatial or geo-reference data and facilitating asset management

#### **3.02 GENERAL CONDITIONS OF CONTRACT:**

All works covered under this specification will be carried-out in accordance with the relevant section of the tender specification with such modification as are applicable to the respective types of works covered in the specification.

#### **3.03 PRICES AND QUANTITIES**

Bidders are required to quote the rate on Per Kilometer basis in Schedule-I of the specification for the items and quantities specified therein and job rate.

#### **3.04 RATES:**

The quoted rates shall be FIRM and no increase on these rates shall be allowed under any circumstances. If contractor quotes the rates for part work the tender will not be acceptable.

#### **3.05 IDLING CHARGES**

No idling charges will be payable by the MPPTCL for any reason whatsoever to the contractor for stoppage of work. This may please be noted.

#### **3.06 COMPLETENESS OF TENDER:**

Each section of the tender should be complete and include all associated works not specifically mentioned in the schedule/specification etc, but essential for completeness of the work. The contractor shall not be eligible for any extra charges in respect of such minor works though not specifically included in the tender or contract schedule.

#### **3.07 COMPLIANCE WITH REGULATIONS:**

**3.07.1** Unless otherwise specified, all works shall be carried out in accordance with the Indian Electricity Act-1910, Indian Electricity Rules-1956 / Electricity Act-2003 with any amendments or revision thereof which may be issued during the currency of the contract and the requirement of any other Regulations and Acts in India (including local statutory bodies) which the MPPTCL may be subjected to.

### **3.08 TAXES AND DUTIES:**

- 3.08.1** The Contractor shall be entirely responsible for payment of all taxes, duties and other such levies legally payable/incurred until completion of Project.
- 3.08.2** The deduction of Income Tax as per statutory requirement of this contract shall be made from monthly bills.
- 3.08.3** GST Tax shall be payable extra at the rate prevailing at the time of services provided for installation, erection, testing including commissioning implementation of TAMS System and also for services under AMC (excluding the cost of materials). The responsibility for timely payment of such statutory levy shall rest on the contractor. The GST Tax would be paid to the concerned/ reimbursed to the contractor separately by the MPPTCL based on prevailing rates and regulation. To claim reimbursement of GST tax, contractor should ensure that the GST registration no., GST amount should be clearly mentioned in each bill/invoice.

### **3.09 TERMS OF PAYMENTS:**

- 3.09.1** MPPTCL shall pay the Contractor in the following manner on the basis of the Price given in the Price Schedules. Bills for payment in respect of work component completed in all respect at each site shall only be claimed by the Contractor. No claim of partly completed work activity shall be entertained.

**a) 20% advance payment of contract price of item A(i,ii and iii), Schedule-I(B)(including GST) :-**

MPPTCL shall pay to the Contractor Twenty percent (20%) of the **contract price of item A(i, ii and iii), Schedule-I(B)(including GST)** as an advance payment after submission of advance payment bank guarantee for an amount equal to 1.2 times advance amount, submission of performance Bank guarantee and execution of contract agreement and certificate of successful completion & acceptance of Pilot Project (Phase One). The same shall be paid on immediate basis on submission of valid claim in all respect in the prescribed format. An advance payment security in the form of a Bank Guarantee for an amount equal to 1.2 times the amount of advance payment valid till be contract period and extendable upto the date of adjustment of advance, is to be submitted by the contractor. Beyond contractual completion period, the unadjusted portion of the amount of advance shall attract interest @ 24% per annum.

**b) 20% advance payment of contract price of item A(i and ii), Schedule-I(A)(including GST) upon successful completion & acceptance of Pilot Project (Phase One)**

MPPTCL shall pay to the Contractor Twenty percent (20%) of the **contract price of item A(i and ii), Schedule-I(A)(including GST)** as an advance payment after submission of advance payment bank guarantee for an amount equal to 1.2 times advance amount, on submission of certificate of successful completion & acceptance of Pilot Project (Phase One). The same shall be paid

on immediate basis on submission of valid claim in all respect in the prescribed format. An advance payment security in the form of a Bank Guarantee for an amount equal to 1.2 times the amount of advance payment valid till be contract period and extendable upto the date of adjustment of advance, is to be submitted by the contractor. Beyond contractual completion period, the unadjusted portion of the amount of advance shall attract interest @ 24% per annum.

**c) Running Payment :-**

70%/90% payment of various items of supply and field activities shall be made in following manner

<b>Sr. No.</b>	<b>Item/Activity</b>	<b>Payment to be done including applicable GST</b>
1	Item A(i, ii and iii), Schedule-I(B)	70%(adjusting 20% advance) of contract price of the quantity covered in pilot project after successful completion & acceptance of Pilot Project. Thereafter, 70% (adjusting 20% advance) of the work executed on quarterly basis
2	Item A(i and iii) Schedule-I(A) and item B(a, b and c) Schedule-I(B)	70% (adjusting 20% advance) contract price on the basis of completion of activity as per specification.
3	Item A(ii) Schedule-I(A) and item C(iii) Schedule-I(B)	90% contract price on the basis of completion of activity as per specification.
4	Remaining Items of Schedule-I(A) and Schedule-I(B)	90% contract price on the basis of completion of activity as per specification.
5	Balance 10% contract price.	On completion and acceptance of project
6	Maintenance Charges Schedule-I(C)	100% on prorata basis of yearly charges on quarterly basis subject to deduction if any as per clause 5.7, Section-V.
7	All payments shall be made on completion of 30 days from the date of submission of valid claims complete in all respect on the basis of certificates issued by the Executive Engineers in charge of Control Centres on submission of bills in prescribed format.	

**3.09.2** Terms of payment, which would be applicable for the equipments / materials covered under the present specification has been specified under clause 3.09.1 above. It has been observed that in view of delay in submission of required documents or non-compliance of various procedures specified by MPPTCL for claiming payments, delay in release of payments takes place. It is desired that contractor may go through the complete procedure and ensure compliance of the same, so that timely payments could be ensured.

### **3.10 RESPONSIBILITY FOR SAFE DELIVERY AT SITE:**

**3.10.1** Responsibility for safe delivery of the equipments up to the destination anywhere in MP shall rest on the Contractor. To meet this requirement, it shall be the responsibility of the Contractor to arrange transport through a duly registered Transport agency and ensure proper packing so that there is no damage to the equipments and its accessories during transportation and unloading at site. Any loss or damage caused to the material during transit/unloading shall be made good by the Contractor free of all charges within one month from the date of intimation by our consignee to this effect. The intimation will be sent within thirty days of receipt of equipments and its accessories at site.

**3.10.2** It is however advised to intimate well in advance to our consignee regarding dispatch of materials on his contact no./ Mobile no., followed by written confirmation, on receipt of dispatch instructions so that necessary arrangements could be made by him to take delivery of material at store/site. Please also depute your representative immediately on arrival of material at the destination to arrange proper stacking and conducting physical verification to establish shortages / damages, if any, which should be replenished in shortest possible time say, within two / three weeks. On account of the above, if any delay occurs in issuance of MRIC (Material Receipt & Issue Certificate), shall be to the Contractor account.

### **3.11 CLIMATIC CONDITIONS AND ALTITUDES:**

The equipment and materials offered shall be suitable for use in tropical climate and for site locations upto an altitude of 1000 meter (3000 ft) above mean sea level maximum ambient temperature of 50 deg. C and humidity approaching saturation for extended periods during the monsoon months when the dry bulb temperature may be of the order of 30°C.

### **3.12 PERFORMANCE BANK GUARANTEE (PBG)**

#### **3.12.1 PERFORMANCE GUARANTEE:**

**The successful Bidder shall execute a Performance Bank Guarantee for 10% of the contract value, within 28 days of receipt of the notification of award of contract. The PBG shall remain valid for a period of 60 days beyond the expiry of the defect liability period.**

**3.12.2 Failure of successful Bidder to comply with the above requirements of submission of PBG and additional PBG if applicable, shall constitute a sufficient ground for the annulment of the award and forfeiture of the EMD.**

**3.12.3 TAMS System including associated equipment/material, software covered under the Contract shall be guaranteed for performance and quality for a period of 24 months from the date of commissioning.**

**3.12.4** The following conditions shall also be applicable for the contract:

- a) Updating of Software during the currency of contract including AMC period.
- b) In case any defect in the equipment/ material including hardware & software is found within guarantee period, the same will be replaced/ repaired by the Contractor on free of cost basis. The replacement/ repairing will have to be organized by Contractor expeditiously and preferably within one month's time.
- c) If for the purpose of replacement/ repairs, the equipment/ material is required to be dispatched to supplier's works, all charges towards transportation/ insurance/packing and forwarding will have to be borne by the Contractor for to and fro dispatches.
- d) If the equipment/ material develops defect within guarantee period after installation at site, for the purpose of replacement/ repairs, the same will have to be dismantled and taken out by MPPTCL. In such cases, actual cost of dismantling, any other incidental cost and cost of re-erection/ re-assembly and replacement of the equipment/ material will also be recoverable from the Contractor.
- e) In case it is observed that replacement/ repairs of equipment/ material is not being provided to us within reasonable period and proper response is not received from the Contractor, then apart from operating Clause of Penalty (which provides for imposition of penalty/ liquidated damages, risk purchase at Contractors cost and cancellation of contract) the MPPTCL may also take suitable penal action against the Contractor which may include debarring him from all future business with the MPPTCL for a period which will be at the discretion of the MPPTCL.

### **3.13 INCORPORATION OF OBSERVATIONS:**

The Contractor shall make all indicated changes in the design which are necessary to make the equipment/system conforming to the provisions of specification without any additional cost. Approval of the drawings shall not relieve the Contractor of his obligation to meet the requirement of the specification or the responsibility for the correctness of drawings.

### **3.14 INSPECTION AND TEST CERTIFICATES:**

**3.14.1** All machinery, apparatus or materials supplied will be subject to inspection and approval by the MPPTCL's representative before despatch if possible otherwise on arrival at the destination. Inspection before despatch will not however relieve the Contractor of his responsibility to supply strictly in accordance with the specifications.

**3.14.2** All machinery, apparatus and materials shall conform to provisions of any statutory acts such as the Indian Electricity Act, Indian Factory Act, the Indian Boiler Act, etc. and corresponding rules and regulations as may be applicable.

**3.14.3** The MPPTCL's representatives shall be entitled at all reasonable time during manufacture to inspect, examine and test at the contractor's premises the material and workmanship of the material to be supplied under this contract.

**3.14.4** The material shall not be despatched unless material is inspected by the Contractor's authorized representative. When the material has passed the specified tests, the Contractor shall furnish a certificate to this effect in writing alongwith the test certificates. The material shall not be despatched unless the test certificates are approved.

**3.14.5** These test certificates should be in accordance with latest issue of the relevant Indian Standards or as approved by the order placing authority.

### **3.15 COMPLETENESS OF EQUIPMENT:**

**3.15.1** The equipment shall be complete in every respect with all minor fittings and accessories even though those may not be specifically mentioned in the MPPTCL's specification or in your offer. The Contractor shall not be eligible for any extra price in respect of such minor fitting and accessories which can be considered as an essential part of the basic equipment even though not specifically mentioned in the specification or the offer.

**3.15.2** If any minor accessory has not been stipulated but is essentially required for satisfactory operation of the equipment, the same shall be deemed to have been included in the prices and shall be supplied by you without any extra cost.

### **3.16 WORKMANSHIP:**

All materials shall be of the best class and quality most suitable for the conditions of operation under the climate conditions at the altitude indicated in these general conditions for supply of material. The workmanship shall be of the best grade and the entire construction in accordance with the best modern practice.

### **3.17 PACKING:**

**3.17.1** The Contractor shall be responsible for the stores being sufficiently and properly packed at his expense for safe and secure transport by road and to withstand handling and transport at destination.

**3.17.2** Each package shall be prominently and distinctly marked on at least two faces indicating the full address of the consignee, destination, name of equipment, MPPTCL's order number and volume of the package.

**3.17.3** Each package shall contain in a water proof cover a detailed list indicating the order reference and date and listing the contents. Each item contained in the packing or box shall be described sufficiently to enable easy identification and the quantity, weight etc. shall be given. The packing shall conform to the specification, rules and regulations prescribed by the carriers.

**3.17.4** Royalties for patents or any charges for the use or infringement thereof that may be involved in the supply is included in the offered prices. The Contractor shall protect the MPPTCL against any claim thereof.

### **3.18 TRANSPORT:**

**3.18.1** The material shall be dispatched by ROAD TRANSPORT through Registered Transport Agency on door delivery freight paid basis to the respective destinations in Madhya Pradesh. It is the responsibility of the Contractor to ensure safe delivery of material at site store/ Transmission store of the Company anywhere in State of M.P. The transportation includes material loading at contractors works, transportation, and safe delivery of material including unloading at MPPTCL's site store / Trans. Store (as the case may be).

### **3.19 FREIGHT ANDTRANSIT INSURANCE:**

**3.19.1** Bidder may please note that it shall be the responsibility of the supplier to arrange transport through a duly registered Transport Agency duly insured and ensure proper packing so that there is no damage to the material during transportation. Any loss or damage caused to the material during transit due to negligence on the part of supplier shall be made good by the supplier free of all charges within one month from the date of intimation by our consignee to this effect. The intimation will be sent within thirty days of receipt of equipments/ material and its accessories at site.

**3.19.2** If the supplier fails to make good the loss or damage caused to the material, the consignee(s) shall be free to repair the damages / replace the shortages / losses from other sources and they shall be free to recover the cost of such material / expenses of repairs either from the supplier / balance bills or from the security deposit as deemed fit.

### **3.20 QUANTITY:**

The quantities required are indicated in the Schedule of price & quantity. The purchaser reserves the right to vary the quantities upto about 30% while placing the order. The Bidder will have to supply the entire quantity on same rates and terms & conditions.

### **3.21 PROVISION OF EXTENSION ORDER:**

MPPTCL reserves the right to place extension order for **100%**of ordered value on same rate, terms & conditions within **12 months** from date of placement of this Contract.

### **3.22 REPLACEMENT OF DEFECTIVE SUPPLIES:**

Please note that the following conditions shall be applicable:-

(a) In case any defect in the equipment material is found within guarantee period, the same will be replaced / repaired by the Contractor on free of cost basis. The replacement / repairing will have to be organized by

Contractor expeditiously and preferably within one month's time. It may please be noted that if repair/replacement of equipment/material is not organized within 3 months of notice of defects/failure being sent, Company shall recover the cost of such equipment from available payments/S.D. as the case may be without further notice and with such penalty as it may deemed appropriate for non-compliance of contractual obligations.

(b) All other conditions, as described under clause 3.12, "Performance Guarantee" shall be applicable for the purpose of replacement of defective supplies.

### **3.23 PLACE OF MANUFACTURE, TESTING AND INSPECTION:**

The name of the manufacturer and the place of manufacture, testing and inspection for various portions of the contract works shall be stated in the tender.

### **3.24 TRAINING:**

The Bidder shall provide training for installation and maintenance staff of the Purchaser free of cost, at supplier works or at site as mutually agreed. The location of various trainings shall be conveyed during implementation. The number of trainees, quantum of proposed training, pre-training qualifications required & the duration of the proposed training required shall be finalized by the successful bidder in consultation with the purchaser. The Bidder shall provide all training materials and documents in hard and soft formats both. All necessary equipments required for the training shall be arranged by the successful bidder.

### **3.25 GUARANTEED AND GENERAL PARTICULARS OF THE EQUIPMENT:**

The Bidder shall indicate guaranteed particulars and performance figures in respective Schedules.

### **3.26 RECOVERIES FOR LIABILITIES AGAINST OTHER CONTRACTS:**

Any amount recoverable from the successful Bidder against earlier contract with the Company will be adjusted from payment due against the contract that may be awarded under this specification.

### **3.27 LITIGATION HISTORY:**

Bidders are requested to submit details of all litigation, arbitration and other claims whether pending, threatened or resolved in the last five years, with the exception of immaterial claims with cumulative possible impact of not more than 10% of the Bidder's total assets. The purchaser may disqualify Bidders in the event that the total amount of pending or threatened litigation, arbitration or other claims represents hundred percent (100%) of the Bidder's net worth. Furnishing of this information by the Bidder is mandatory requirement.

### **3.28 TESTS AT SITE:**



The procedure for carrying out such tests shall be intimated well in advance by the contractor to the MPPTCL and this will be subject to the approval.

All the tests detailed in the respective sections of the specification for the equipment shall be carried out at the manufacturer's expenses at his works and the MPPTCL reserves the right to be represented at these tests. No shipment/despatch of any portion of the equipment shall be made till the relevant test certificates are approved by the MPPTCL. The site tests to be conducted shall be as agreed between the MPPTCL and contractor at the time of placing the order.

### **3.29 COMPLETE OFFERS:**

The purchaser would prefer complete offer for the scope of works specified in the Bid Document. Offer received for part of the scope works shall be rejected.

### **3.30 COMPLIANCE WITH OTHER CONDITIONS:**

**3.30.1** Although all other conditions have clearly been spelt out in the tender document, **it is once again brought to the notice of Bidder that they should go through the tender document carefully and comply all other conditions also like furnishing of type test report, furnishing of list of past supplies, Income Tax / GST Clearance Certificate, Profit and Loss account, Balance Sheet for last three years, drawings and write-up for the manufacturing process.**

**3.30.2** For verifying reasonability of prices by the purchaser, the Bidders are required to enclose copies of orders under execution/executed recently for other Utilities alongwith tender for the offered equipment. It may be noted that the order copy must contain full scope of supply including price schedule etc. without any omission/deletion/hiding any information.

**3.30.3** In nutshell, the offer at the time of submission of technical and commercial Offers itself should be complete in all respect. It should not be expected that in case of lack of any information, the MPPTCL will make any correspondence with the Bidder. The documents and details as called for in the tender must be submitted without making any reference to submission of such certificate against past order, tender or past experience of supplies with the MPPTCL etc. All tenders wherein these conditions are not complied with may run the risk of rejection without any correspondence from our side.

### **3.31 LOSSES TO PROPERTY:**

Losses that MPPTCL may incur on account of commission/omission of contractor and which can be quantified shall be reimbursed by the contractor. The decision of MPPTCL shall be final and binding in all cases.

### **3.32 SETTLEMENT OF DISPUTES:**

In case of any dispute, the matter shall be referred to the Chief Engineer (Procurement), MPPTCL, Jabalpur whose decision shall be final and binding to all. The courts situated at Jabalpur (MP) shall have exclusive jurisdiction to entertain and try all matters arising out of this contract.

### **3.33 ANNUAL MAINTENANCE CONTRACT (AMC):**

The Annual Maintenance Contract shall be as per terms & conditions stipulated in Section-V of this specification.

### **3.34 GENERAL REQUIREMENT OF INSTALLATION WORKS, SPECIFICATION TO BE FOLLOWED:**

- 3.34.1** The Contractor shall acquire in its name all permits, approvals and/or licenses from all local, state or national government authorities or public service undertakings in the country where the Site is located that are necessary for the performance of the Contract, including, without limitation, visas for the Contractor's and Subcontractor's personnel 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 MPPTCL and that are necessary for the performance of the Contract. The MPPTCL may, however, furnish to the contractor such certificates as may be required for the necessary permits/priorities for the execution of works, if MPPTCL considers the demand justified.
- 3.34.2** The Contractor shall comply with all laws in force in India. The laws will include all local, state, national or other laws that affect the performance of the Contract and bind upon the Contractor. The Contractor shall indemnify and hold harmless MPPTCL 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.
- 3.34.3** The Contractor shall be responsible for the true and proper setting-out of the Facilities in relation to bench marks, reference marks and lines provided to it in writing by or on behalf of MPPTCL.
- 3.34.4** The contractor shall employ the necessary labor on their own resources & responsibility.
- 3.34.5** The Contractor shall, in all dealings with its labor and the labor of its Subcontractors currently employed on or connected with the Contract, pay due regard to all recognized festivals, official holidays, religious or other customs and all local laws and regulations pertaining to the employment of labor.
- 3.34.6** The Contractor shall observe all applicable regulations regarding safety on the Site.
- 3.34.7** The housing accommodation with proper water & sanitation facility shall be provided by the Contractor for the self and laborer.
- 3.34.8** The compliance of the statutory requirements under EPF Act, Workmen Compensation Act and other labor welfare Laws shall be the responsibility of the Contractor. The relevant documents in this regard shall be provided by the Contractor to MPPTCL on regular basis.

**3.34.9** Payment to daily wages workers shall be made by the contractor in accordance with minimum wages prescribed by the State Govt. and ensure E.P.F. deduction according to the E.P.F. Act 1952 with latest amendment in presence of MPPTCL's representative not below the rank of Assistant Engineer. Every employee shall have to be enrolled for membership of E.P.F. from the date of his joining i.e. deduction towards EPF are to be effected from the first day of employment. The contractor shall have to maintain paid muster roll and obtain a certificate from the MPPTCL's representative regarding minimum wages, EPF deductions and payment made in his presence. The paid muster roll shall be produced for inspection of Govt. Inspector or MPPTCL's officer as and when called for.

**3.34.10** The work shall remain open for inspection of authorities of MPPTCL round the clock. The inspection register shall be opened at site and maintained at all times for Installation works exclusively. The higher authorities of MPPTCL, if records their comments or indicate shortcomings in the work, their compliance and rectification thereof, shall be ensured by the Contractor immediately and compliance so done shall be got verified.

### **3.35 DEVIATION IN COMMERCIAL AND TECHNICAL BID:**

Bidders are requested to go through various commercial and technical conditions stipulated in the tender document. Please note that acceptance of all techno-commercial terms & conditions are to be confirmed by the Bidder.

### **3.36 PROGRAMME CHART AND PROGRESS REPORT:**

**3.36.1** The time and date of completion of work as stipulated in the relevant clause and accepted by the Bidder shall be deemed to be the essence of the contract. The Contractor shall so organize his resources and perform his work as to complete it not later than the date agreed to.

**3.36.2** A periodical review meeting between Contractor and MPPTCL shall be held to analyse the scheduled and actual progress, targets for the next period and to sort out bottlenecks, if any.

**3.36.3** Please note that during execution of work, if it is observed that contractor is not maintaining the pace of work as per programme submitted by him then the MPPTCL shall serve a fifteen days notice to the contractor to make up the short-fall in progress of works viz-a-viz that promised in the programme chart. On expiry of notice period, if it is found that the short-fall has not been made up, then the MPPTCL shall have the right to terminate the contract forthwith for balance work and get the same executed at the risk and cost of the contractor through other agency/ departmentally and recover the expenditure so incurred from him.

### **3.37 USE OF PRIVATE ROADS/APPROACH ROAD TO SITE:**

**3.37.1** The contractor shall obtain necessary permission for use of private/ forest/ cannel service roads for transport of equipments etc. In case of difficulty the MPPTCL will provide necessary help for the same, wherever possible under

the rule. Any charges levied by the concerned authorities for use of such roads etc. shall be borne by the contractor.

### **3.38 TOOLS AND PLANTS TO BE ARRANGED BY THE CONTRACTOR:**

The contractor shall be required to provide at his own expenses all necessary equipments, tools & plants for carrying out survey work.

### **3.39 ACCEPTANCE OF OFFER:**

The MPPTCL will communicate acceptance of offer to the successful Bidder through a telegram or a letter of intent and this will be followed by a detailed order or formal contract which will be binding on the contractor.

### **3.40 DELIVERY PERIOD & COMPLETION SCHEDULE:-**

**3.40.1** The delivery of equipments/material and completion schedule shall be counted from the effective date. Following table indicates delivery of associated equipments / materials & completion schedule for TAMS System for HQ at Jabalpur, three Transmission Control Centers at Jabalpur, Bhopal & Indore and field offices.

<b>Sr. No.</b>	<b>Description</b>	<b>Completion Period</b>
<b>A</b>	<b>First phase work</b>	
1	<b>Pilot Project (10% of Bid quantity):</b> <ul style="list-style-type: none"> <li>• Resource Mobilization</li> <li>• Field Survey for line &amp; substations as per Annexure-I.(B).</li> <li>• Preparation of base map &amp; GIS creation with field &amp; other data using GIS desktop software</li> <li>• Integration of field and other GIS data on COTS GIS server software to showcase the initial Geo-portal capabilities.</li> <li>• This activity shall be completed to demonstrate capability for under taking complete order</li> <li>• For the above activities, the bidder should use their own Desktop GIS &amp; server GIS software.</li> </ul>	9 months from the effective date.
<b>B</b>	<b>Second phase work (applicable to whole work):</b>	
1	<b>First stage works:</b> <ul style="list-style-type: none"> <li>• Supply &amp; installation of associated equipment and software.</li> <li>• Field survey &amp; Input data Collection, integration of inputs &amp; updating with software, development of data base &amp; records etc.</li> <li>• Design and Finalization of System Requirement Specification (SRS)</li> </ul>	24 months from the effective date.

	<p>document.</p> <ul style="list-style-type: none"> <li>• Mobile Application development &amp; implementation</li> <li>• Customization and testing along with integration of ERP &amp; SCADA applications of MPPTCL.</li> <li>• Installation and commissioning of TAMS scheme at Head Quarter / Control center at Jabalpur.</li> </ul>	
2	<p><b>Second stage works:</b></p> <ul style="list-style-type: none"> <li>• Distribution of Desktop GIS software to 03 No. Control Centers.</li> <li>• Implementation of TAMS functionality at identified field offices (EHV Lines &amp; Substations) with assigned credentials.</li> <li>• Functional Trainings as per the bid.</li> </ul>	27 months from the effective date.
3	<p><b>Third stage works:</b></p> <ul style="list-style-type: none"> <li>• Implementation of TAMS functionality at all remaining field offices (EHV Lines &amp; Substations)</li> <li>• Functional Trainings for remaining field offices as per the bid.</li> </ul>	30 months from the effective date.

**3.40.2** In case of change in transmission programme, delivery of equipments and completion schedule may be regulated as per the progress of works and availability of funds. In such cases, the manufacturing clearance for equipment/material and completion schedule would be given prior to minimum one month accordingly and completion period shall be specified in the manufacturing clearance/completion schedule letter for all contractual purposes.

**3.40.3** To avoid any confusion in regard to applicable completion schedule, it may be noted that if the detailed order is released in first week of January' 2018, completion of first phase work in 20th month will be due in first week of August 2019& so on.

**3.40.4** Bidders may please note that above period of completion schedule includes the period required for collection of data from various departments, approval/clearances of methodology to process work, drawings etc. if any. Accordingly advance preparation for submission of these details/ documents within one month may be made.

**3.40.5 PILOT PROJECT:**

Before undertaking first phase works, the contractor shall have to carry out implementation of **TAMS**System for identified EHV Lines/Substations as per Annexure-II in five months from the date of issue of the Contract to demonstrate the capability of proposed system utilizing hardware etc. In case of failure of the Contractor to prove its capability for this work in line with the technical parameters as prescribed in the document, the MPPTCL shall be at liberty to cancel the order without liabilities on either side, provided that such a failure on the part of the Contractor shall not be on account of an act or omission on the part of MPPTCL.

**3.41 SCHEDULES AND ANNEXURES:**

- 3.41.1** Annexures giving details of various items are enclosed at the end of specification. Bidders should consult these annexures before filling the tender.
- 3.41.2** Schedules are also enclosed in the specification. Bidders are required to go through the complete specification and consult explanatory notes, before filling in various schedules.
- 3.41.3** All the schedules shall be filled in by the Bidders and complete information shall be supplied. In complete schedules may take his tender liable for rejection.
- 3.41.4** The Bidder may note that the name of lines as proposed for detailed survey work may change with another new line or deleted or new line may also be added for detailed survey work.

**3.42 QUESTIONNAIRE:**

The questionnaire schedule enclosed herewith contains a set of questions and Bidder is requested to answer each and every question clearly and without ambiguity.

**3.43 CHECK LIST:**

The check list in respect of various schedules etc. required to be submitted by the Bidder without which the tender will be considered incomplete and liable for rejection. The Bidder should submit all schedules duly filled-in along with their offer.

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## **Section-IV**

### **TECHNICAL SPECIFICATION**

#### **4. General Information & Scope of Work:**

**4.01** This project aims to develop modern and comprehensive Power Transmission Records Management System in the State of Madhya Pradesh through implementation of Geographical Information System (GIS). Geographic Information System solution consists of capturing, storing, checking, integrating, manipulating, analyzing and displaying geodata related to positions on the Earth's surface and data related to attributes of the Power System installations including the transmission lines. This is achieved through GIS mapping to pre-defined scale, generation of intelligent electrical network maps and superimposing them on the land base GIS maps and Topo Maps of SOI.

**4.02** The objectives of the work inter-alia shall include the following: -

**4.02.1** To develop GIS layers indicating the State & District Boundaries, National/State High Ways, major Roads, Railways Lines, water bodies, Defence, forest & Airport areas, canals etc. in the Right of Way of the Transmission lines covered in the project with proper labeling and standard symbology.

**4.02.2** Digitization of topographical maps, High Resolution Satellite Imagery (HRSI) and integration with Records of Power related installations in the State of MPPTCL in GIS layers depicting Geographic information, attributes information and its interlinking with Transmission records.

**4.02.3** To identify the Power Generating stations, Sub-Stations upto 33KV level, Transmission Towers and Lines upto the 66 KV level through GPS survey and plotting the same as point and line features in the geo-referenced map suitably with the attribute data and with proper labelling and standard symbols. Topologies may be required for measurements of distances, lengths etc. for co-related features.

**4.02.4** Development of the Sub-Station Land Utilization Plan (LUP) Map through DGPS survey upto a desired accuracy level and vectorization of the same on GIS layers with proper labelling and standard symbology so that area of the assets can be assessed on demand in metric units.

**4.02.5** Development of Single Line Diagrams of the Sub-Stations for 33KV and higher voltage class in standard image/vector formats and incorporation of the same with the GIS with proper labelling and standard symbology.

**4.02.6** To build up Geo-Relational Database Management System and integration of the same with the geo-graphical features so far captured so that data can be obtained from the GIS in a user friendly manner.

**4.02.7** Superimposing of route map of lines, towers & location of sub stations on topo-sheet i.e. superimposing of digital map of a nominal scale of 1:50000.

**4.02.8** Creation of back ground map (base map) based on open source satellite imagery, town maps and DGPS survey. The background map for the transmission network shall be map of MP state covering the details like villages, towns, cities, approach roads, National highways, express high way, rivers, terrain, hills, costal area, forest area, desert, dams etc on 100m of either side of the transmission line for planning.

**4.02.9** Integration/superimpose of transmission network is to be done on back ground map on scale of 1:50000 with all coordinates & relevant data (attributes). The satellite image should be open source viz. Google, Bing.

**4.03** Topographical maps are very important as it comprises boundaries of all land parcels and contains methodically arranged information like forest, hills, water bodies, roads, rivers, developments. Therefore regular updation of the Topographical Maps is of paramount importance.

**4.04** Transmission lines widely spreader in whole Madhya Pradesh shall initially be selected on certain criteria (limiting to maximum 10% of the quantum for GPS survey) for developing a GIS, integrate database with system and apply the software friendly for getting output as per requirement of MPPTCL. Thus, the work under the contract may be said to be pilot project for developing a system for storing basic data, analyzing them as & when required for specific purposes. After successful completion of GPS/DGPS survey & implementation of GIS system and information generation up to mark will provide a way to develop database of & every electrical asset of the transmission line & substation within whole Madhya Pradesh which will be huge work.

**4.05** The process of development of Geo-Referenced Power Map for use of MPPTCL within the state of Madhya Pradesh will broadly involve :

- i)** Collection of data using DGPS, Geo-coding & Geo-referencing of High Resolution Satellite Image (HRSI).
- ii)** If required, digitization/redrawing of toposheet (scale 1:50,000) by converting Raster Images to Vector graphic images.
- iii)** Field Verification, Public Validation, Attribute addition etc.
- iv)** Development of geo-relation database for report generation, querying database in user-friendly manner.
- v)** Supply and delivery of Software/s, Handheld DGPS and other related peripherals Hardware.
- vi)** Development, commissioning and integration of Mobile Application and Web Application for updating facility management services.
- vii)** Integration of the mapping system so developed as per the contract with ERP/SCADA system of MPPTCL.
- viii)** Support for 5 years for maintaining record, updating, imparting training etc.

**4.06** The hardware (server, computers, printer, storage devices, OS, Workstations etc.) for GIS software & its relevant database shall be provided by the MPPTCL. However, the bidder has to submit minimum basic requirements including space



&Band width required for Server, computer operating systems, hardware suitable for handling, data input & display of digital maps & database within 15 days from date of agreement so that such facilities could be made available matching with the schedule.

**4.07** The Topo-sheets of Survey of India shall be procured by MPPTCL from department of Survey of India in vector form with license in the name of MPPTCL and provided the same to bidder for the work as per the provision of the contract. The bidder shall not use any way these maps which will be provided by MPPTCL to the successful bidder and the same will not be used for any other purpose other than the scope of the contract. In this regard, the bidder shall have to execute an agreement with MPPTCL.

**4.08 GIS DATA CREATION** inter-alia shall include the following:

**4.06.1 Survey and data collection:**

- a) The Survey should be done by the DGPS instrument with high accuracy (15cm or less) for collection of GCPs and development of SubStation LUP map and by the DGPS instrument for other locations like towers etc. with (15cm or less). The GCPs will be collected by the agency with uniform distribution with an average of one per square Km. More GCP locations may be demarcated wherever it is felt necessary.
- b) Bidder has to collect co-ordinates for existing lines & new charged lines, create digital map (if required) & superimpose the same on SOI data & base map for any modification, addition in MPPTCL Transmission network (tower, lines, S/s etc.) during project implementation phase and thereafter up to 1 year. The DGPS Survey is to be carried out of the Tower of 400kV, 220kV & 132kV Transmission Lines & its connected substations.
- c) Surveyors shall walk along the each locations of transmission lines with a DGPS rover & capture the co-ordinates of the location (Tower). Wherever the line crosses the other power lines, Railway line, Express highway, National Highway, the contractor shall record co-ordinates on the points of crossing, wherever line route passes over permanent land marks.
- d) During the Physical survey, the concern officer of the department related to the concern line will provide basic data and guidance to the contractor especially for identification of line(s), towers & approachability to towers etc. The contractor shall have to submit requisition in this regard well in advance preferably fifteen days in advance from the schedule of reporting to his headquarter so that concerned incharge of the line(s) could plan accordingly.
- e) In the mapping procedure the following details need to be collected, Geo-coded, Geo-referenced and linked to various layers. Each feature will be linked to the feature ID, unique features IDs should be generated and take approval of MPPTCL for finalization. The attributes listed below are not limited but any features other than the mentioned below also need to be collected and linked.
  - i. Tower locations of the transmissions under the scope of the contract including tower Nos., tower types, names of line etc.
  - ii. Generating Station/Substation locations (existing and proposed) connected with line of 132KV level and above and name.

- iii. Tower locations for 66 KV and above of MPPTCL/PGCIL/any other utilities crossing the line of MPPTCL under survey including tower Nos., tower types, names of line etc. for indicating power lines crossings digitized maps.
- iv. Pole locations for lines up to 33KV and above crossing the line of MPPTCL to be surveyed including names of line to indicate power line crossings with distribution & sub-transmission network.
- v. Electrical Masts/Poles/Km Posts on either side of Railway crossings including name of railway line & either side Railway stations, Nos. of tracks etc.
- vi. The State boundary & District boundaries, National/State High Ways, major Roads, water bodies, Defence & Airport areas, rivers/nalas/canals, any landmarks etc. with proper identification, labelling and standard symbols
- vii. Single line diagram with major equipment data (to be provided by MPPTCL) of each Substation and lines of MPPTCL are required to be obtained from the respective authority.

#### **4.06.2 DIGITIZATION**

The process of vectorization is assumed as re-drawing to achieve maximum possible accuracy. During the process of redrawing, error rectification and updating should be done. The methodology to be followed in creation of geo-referenced map will be as follows:

- a) Transmission line Towers and Lines to be surveyed under scope of the contract are required to be identified through GPS survey, Geo-coding and plotting the same as point and line features in the geo-referenced map is necessary with the attribute data including proper labelling and standard symbology and integrate them in different layers of the GIS system. Topologies may be required for measurements of distances, lengths etc. for co-related features.
- b) The State boundary & District boundaries, National/State High Ways, major Roads, Railways Lines, water bodies, Defence & Airport areas, rivers/nalas/canals, any landmarks etc. with proper identification, labelling and standard symbols are required to be vectorized and integrate them in different layers of the GIS system. Vectorization should be done on the geo-referenced map and on the basis of physical survey, if necessary.
- c) Generating stations, Sub-Stations of 66KV & above level, Towers/Poles & lines above the 440Volts (LT line) to 765KV level crossing the line under survey are required to be identified through GPS survey and plotting the same as point and line features in the geo-referenced map is necessary with the attribute data including proper labelling and standard symbology and integrate them in different layers of the GIS system. Topologies may be required for measurements of distances, lengths etc. for co-related features.
- d) Development of the Sub-Station LUP Map through DGPS survey upto a desired accuracy level is required including vectorization of the same on GIS layers with proper labelling and standard symbology so that area of the assets can be assessed on demand in metric units.
- e) Development of Single Line Diagrams of the Sub-Stations connected to the transmission line to be surveyed under contract for 33KV and higher voltage class in standard image/vector formats and incorporation of the same with the GIS with proper labelling and standard symbology.

- f) The dimensions and area should be shown in the metric system as well as the traditional system.

#### **4.06.3 DEVELOPMENT OF GEO-RELATIONAL DATABASE:**

- i. The entire information of all the assets and object elements should be stored in a Geo-relational database with the provisions to be correlated with the ERP system of MPPTCL. The entire database should reside in the central server which can be approached and viewed from the client terminals (multi-user facility) through web based browsing. The database should be encrypted to provide adequate protection from misuse and corruption.
- ii. Facility for updating, editing, modifications should be there with hierarchical permissions to the users.
- iii. There should be adequate querying facility and standard/customized reports should be generated on demand by the user.
- iv. Facility for printing of data (Reports) and maps should be there.
- v. Software should be provided "Navigation tool" to allow user to view complete map with zooming facility.
- vi. Software should have facility to allow to view/to find a specific Tower on the map, to find out the distance between two Towers / lines etc.
- vii. Identification of towers and other features through user friendly interface in reference of roads, populated area, landmarks etc.
- viii. The geographical features are required to be updated on yearly basis.

#### **4.09 ESTABLISHI GROUND CONTROL POINTS:**

- 4.07.1** The Primary Ground Control Points (GCPs) are established by Survey of India (SOI) in all Districts of Madhya Pradesh. The data of related primary GCPs will be collected by the Bidder from SOI and these primary control points would be used as known control points for establishing Secondary Control Points at each and every transmission substation of MPPTCL in Madhya Pradesh. Further, Tertiary Control Points will be established on an average at every 10Km in the alignment of transmission lines of MPPTCL in addition to all important points like power line/railway/Major Road/River crossings. The pillar will be erected first at the suitable points on the ground and the GPS observation will be taken thereafter. Tertiary control points will be established.
- 4.07.2** Trijunction pillars will be established as Secondary and tertiary or Auxiliary control points. The design of the pillar for these Ground Control Points is to be obtained from MPPTCL. These Control Points will be established in a set of 3 pillars, about 200m apart w.r.t. primary GCP already by SOI.
- 4.07.3** The contractor shall download raw data from DGPS receiver to a PC at site itself and thereafter apply suitable projection system so as to arrive at Grid Coordinates (Northing, Easting and Elevation with reference to Mean Sea Level) and Ground Coordinates (Northing, Easting and Elevation with reference to Mean Sea Level) from geographical coordinates (Latitude, Longitude & Ellipsoidal Height) observed at site. For doing the network adjustment, Primary Ground Control Point may be fixed for horizontal control.

**4.07.4** All the GCPs will have an identification number – a 10 digit code. The first code will be one digit code – P for Primary GCP, S for Secondary GCP and T for Tertiary GCP, Second will be one digit code - L for line CGP & S for Substation. Third fourth & fifth digit will be for line/substation code, sixth & seventh digit will be for district, and eighth ninth & tenth digits will be individual serial number of the GCP within a block.

Example: SL04901075 01S10001

Here S= type of GCP here it is Secondary GCP, L=CGP established in line route, 049= Code of line, 01 = District Code for \_\_\_\_\_, 075= individual serial number of GCP.

#### **4.10 SUPPLY AND DELIVERY OF SOFTWARES AND HARDWARES:**

Software and peripherals required for data collection, application & report generation needs to be provided by the solution provider as follows-

- a) GNSS Real Time and/or post processing Software as per requirement, appropriate Software for developing data base management system, Standard Software for GIS development & implementation with work-stations license for at least three years including installation of the same.
- b) Software suitable to work with digitized toposheets and referencing to integrate collected data for developing power map of MPPTCL in Madhya Pradesh.
- c) Mobile application for Development, commissioning and integrating, updating facility management services.
- d) Web Application for Development, commissioning and integrating, updating facility management services.
- e) Handheld Differential Global Positioning System (DGPS) with all accessories & associated software.
- f) Differential Global Positioning System (DGPS) with RTK and all accessories & associated software.

#### **4.11 Detailed Scope of Development of Web Based Asset Mapping Integrated with mobile Application**

**4.12.1** The Appointed agency shall develop and implement their own approach and methodology to develop following activities and features in the application -

- a) The State level GIS based Asset management application should facilitate implementation of server-based Working, integration of spatial and Non-spatial data with the existing data base.
- b) Preparation of comprehensive asset base map through:
  - i. Digitization and linking of assets with up dated GIS Map.
  - ii. Preparation of digitized asset map (from the updated base map) in GIS-web platform to make available on the web GIS Platform.

**4.12.2** This WEB GIS application Module shall facilitate monitoring of the Transco Assets. The indicative application functionality of this module is described as follows-

- i. The Map View module should facilitate display of the Asset data layers along with their corresponding attribute details.
- ii. Information Window to display the Asset Specific Information on mouse point and- clickaction.
- iii. Map based query on the Asset attribute data such as the date of installation, product make etc. to facilitate Preventive Maintenance and Replacement of aging installations of transformers and other instruments.
- iv. Geo-spatial query enabling the query of spatial parameters such as distance, proximity, intersection, overlapping etc. to facilitate planning and Decision Support
- v. Generation of Map based Asset Register and Asset Statistics.
- vi. Development of Mobile Application in IOS & Android platform for Sending of field Data in Photos & Forms.
- vii. The following DashBoards are required -
  - a) Statistics on number of Towers/lines/cables/stations on office wise, Line wise, Voltage class wise.
  - b) Facility to drill down each of the dashboard up to level of the individual towers.
  - c) Option required to filter the transmission network and generate map based on the following criteria
  - d) Hierarchy–Zone-wise, Circle-wise, Division-wise, Line-wise, Voltage-class-wise.

The description given here is broad scope of work to be carried out by the contractor. However, any work even if not specifically mentioned but reasonably implied for the successful implementation and good performance of the system are deemed to be included.

#### **4.12 WEB GIS Server Capabilities for Asset Information Management:**

Indicative Asset Management property of Web GIS are as under:

- i) The system should support, host and deliver information on the service-oriented architecture (SOA) and should allow interoperability such that different client systems can request data in native application, without the need to change the data format, its location and/or its transmission protocol.
- ii) The product adheres to Open Geospatial Consortium (OGC®), INSPIRE, and International Standards Organization (ISO) standards for web services and metadata compliance.
- iii) Automatic data visualization feature should be available from the database through web services.
- iv) The system should consume different open interfaces and web-services as OGC WMS, OGC WMTS, OGC WFS, OGC WFS(T), OGC CS-W, OGC

- WFS(G), OGC WMC, WCTS, OPENLS, GeoRSS, WPS-CT and GML etc.
- v) System should can Generate a map from one or more feature data sources (OGC WMS, OGC Open LS (OLS) Presentation Service).
  - vi) The system should support online editing of feature data (geometry and attributes) through the advanced spatial controls.
  - vii) Software should have facility for standard drawing tools, color toolbar, font toolbar, capture & editing toolbars.
  - viii) System should allow the users to edit vector data and transact changes directly back to the database.
  - ix) The system should support connecting and reading directly from different industry- popular databases like Oracle, Microsoft ® SQL Server,PostgreSQL, Informix, or IBM DB2 etc. with PostGIS (without any middleware).
  - x) The system should be able to read popular formats like JPEG, PNG, GeoTIFF, ECW, MrSID, USGS DOQ, CCITTG4, Text file, and ESRI File.Geodatabase (File GDB) should be supported along with those stored in database of Oracle, Microsoft ® SQL Server,PostgreSQL, Informix, or IBM DB2 etc.withPostGIS.
  - xi) System should be compatible with Google Maps, Bing™Maps,MicroStation, AutoCAD, ODBC source(Open Database Connectivity sources).
  - xii) The system should allow the users to perform advanced spatial analysis like proximity analysis and attribute based analysis, Spatial query, Buffer zoning, Measure length etc
  - xiii) System should support server-side caching for vector layers which are not frequently updated
  - xiv) The system should be able to access, publish, and consume the raster datasets, vector datasets
  - xv) The administrator should be able to manage the application from a single location wherein the administrator can configure:
    - a) Web-services
    - b) Server parameters
    - c) Logging configuration
    - d) Cache configuration
  - xvi) Logging capabilities for the service to log its performance data into a given storage which can be turned on and off. The system should allow administrators to manage the published web-services.
  - xvii) The application should allow users to visualize the data with different symbology styles like differentiating feature records based on attributes or types, dynamic labelgeneration with conflict detection, and translucency of all raster data and area colour fill.
  - xviii) The application should allow users to choose the output format in JPEG/JPG, PNG, SVG for Map services and System should support hierarchical legends, and watermarks.
  - xix) Sectional snap of any part on the map, print out on normal paper

of printing (A0, A3, A4, letter etc.). The hard copy & softcopy on the same scale & size of original map, copy of the image & data should be available.

- xx) The system should be able to consume real-time enterprise published spatial data. It should be able to consume the third-party published OGC web-services. Integrating these Webservices with existing enterprise Systems.
- xxi) It is mandatory that the proposed system's security and access control facility restrict individual authorized users to read only or read /update functions within the system. The system should use existing LDAP of department
- xxii) The portal Should be Modern web based application that can be used for finding, Viewing, Querying, Analyzing, and Consuming geospatial data and Web services published by third party products
- xxiii) Distance and Area Measurement: Should have distance measurements tool to allow user to measure the length of irregular shaped lines and Should have area measurements tool to allow user to measure irregular shaped polygons
- xxiv) Navigation tool/palm tool will allow user to view complete map.
- xxv) User can also view/find a specific Tower on the map. The customized find/search feature should be available for any information available on map.
- xxvi) Find out the distance between two Towers / lines.
- xxvii) Using this feature user can find distance between two selected Towers / lines
- xxviii) Addition / deletion / modification of additional Towers shall be possible only by the authorized persons i.e. password protected.
- xxix) The portal Should have a web-based administration console should provide the means for creating and configuring all aspects of server-side engines, web services, and web applications in one place.
- xxx) System Should integrates the multiple data resources into a single 2D or 3D map view that can be easily navigated and able to do the attribute queries on selected spatial features with single click.
- xxxi) System should allow searches based on Data and metadata as well as geographic locations such as cities, region and point of interests. The system should enable users of the standard gazetteer service to query by place name using OGC WFS-G.
- xxxii) System should have capability to retrieve information from the catalog services (CSW) and should be cloud compatible.
- xxxiii) The WebGIS Software shall be highly scalable to serve increasing number of user with no extra cost and it should be independent of cores of server hardware.
- xxxiv) Software should have life time validity & should have adequate back up & recovery facility
- xxxv) The bidder is able to create hyperlink on digital map for any existing

database of department. The bidder's software is capable to fetch the database on click from the existing department server.

xxxvi) The bidder is bonded to provide adequate software as per matched specification of department. Also bidder has to remain ready to upgrade, modify, and correct any of the features of software as per requirement of department.

The description given here is broad scope of work to be carried out by the contractor. However, any work even if not specifically mentioned but reasonably implied for the successful implementation and good performance of the system are deemed to be included.

#### **4.13 Desktop GIS Capabilities for Asset's location & its connected displays:**

- i) The GIS application software should be capable of digitizing transmission network. On completion of digitization the system should be ready for study without any further interventions.
- ii) The software should be used to display / Locate 66kV, 132kV/400 kV/ 220kV line towers & its connected substations on the map.
- iii) Multi Circuit Representation: On a tower more than one OH line may be running. These lines will be of same voltages. The application programme should provide for the digitizing and the display of this multi circuit lines. On Clicking of multi circuit line, the configuration of a line should be displayed.
- iv) The Tower data, S/s data, line data other than co-ordinates (longitude, latitude, altitude) shall be provided by the TRANSCO which TRANSCO intended to display on map. (See Annexure- T)
- v) The bidder has to supply & install multi user, customized, licensed, proper GIS Software for GIS mapping of 66kV, 132kV, 400kV & 220kV lines, towers and its connected substations conducting field acceptance test (FAT) & acceptance of system.
- vi) The software should upload & analyze any satellite image taken in future without any change in the supplied or existing software. The Employer is able to map the new captured satellite image in their existing digital map of transmission network.
- vii) Software should support node lock or floating type of licensing methods. Software should able to Float Licenses (floating type of licensing) on to other machines on the network.
- viii) Software suite should have industry based tools specifically designed to facilitate the use of variable spatial data throughout the enterprise. The List of following features & toolbars os partial; bidders should explicitly bring out additional features available.

The description given here is broad scope of work to be carried out by the contractor. However, any work even if not specifically mentioned but reasonably implied for the successful implementation and good performance of the system are deemed to be included.

#### **4.14 General Tools and Utilities:**



- i) Software should have a concept of workspaces, and should not abide by any particular format; the workspaces must be based on DBMS concept.
- ii) Software should allow to create features defining geometry types, attribute types, hypertext.
- iii) Software should allow to attach external text files, excel files, dBASE& Paradox files.
- iv) Software should be able to send workspace file using your system e-mail application by creating an e-mail message with the file attached.
- v) Software should support workspaces in RDBMS like Access, Sql server and Oracle.
- vi) Transco Asset details & other relevant database shall be stored in the data base server. User with specific rights will be able to add/edit/delete relevant details.
- vii) Software should support creation of warehouses - is a database that contains features and their geometry.
- viii) Software should be able to export to all industry standard vector data formats from a Workspace and Software should support the creation of Warehouse templates.
- ix) Software should support Geometry validation rules and validation of connectivity rules
- x) Software should support export functionality from a warehouse stored inside a DBMS (Access, Sqlserver or Oracle) to DWG/DXF, DGN, GML, SHP and File GDB data formats without the need any database engine, bridge, connector or converter
- xi) Software should support to create Image Footprints
- xii) Software should support creation and management of data catalogs
- xiii) Software should have toggled explorer window to view all the features, queries, models & data connections from the active workspace.
- xiv) Software should integrate a Microsoft Bing Maps aerial/map/birds-eye display window (Bing Maps license required). Users can match the Bing Maps view to the Map Window and synchronize views.
- xv) Software should synchronize with a Pictometry display window (Pictometry license and software required). Users can link the Pictometry view to the MapWindow and synchronize views.
- xvi) Software should support to use a Snapshot of a Map Window
- xvii) Software should support defining Coordinate System File.
- xviii) Software should support Geometry, Logical, Mathematical, Statistical and Time expressions and display Functional Attributes
- xix) Software should support registering raster & vector data and Digitizing Features
- xx) Should have option for automatically place text using feature attribute values, Inserting Labels Interactively, Find Text Conflict, Inserting Leader Lines, Label placement options like Place at angle, Rotate dynamically, Orient to geometry, Place along arc, Place along existing geometry.
- xxi) Software GUI should be an Integrated Ribbon Interface and highly User-friendly Interface, Context-sensitive, tooltips, Hypertext-linked On-Line Help,
- xxii) Software should track and analyze data that is associated with locations along a linear network, LRS Precision Location, Dynamic segmentation and

- xxiii) Software should have functionality like Functional Attributes which allows user to create new query-based attributes from read only/read-write data. These new attributes should be used as input for further analysis within the same functional query, or other analyses.
- xxiv) Software should fundamentally have designed to perform dynamic, complex, ad hoc analysis. User should be able to create queries and nest them over each other, creating a stored logical workflow and enables query results to change automatically in response to data changes.
- xxv) Should display analytical results as Business Graphics like Pie Chart & Bar Chart as a GIS layer. Attribute Query, Spatial Query, Join, Buffer Zone Analysis (Ringed, Multiple and Single), Union, Analyzing Geometry.
- xxvi) Software should be a proven leader in Remote Sensing, GIS, Photogrammetry, radar & Point Cloud Analysis.
- xxvii) Software should support Mosaicing large file size images with color balancing, interactive cut line editing, preview of mosaic etc.
- xxviii) Software should support Advanced/enhanced resolution Merging /Pan Sharpening Techniques for various sensors. Software should support Distributed batch processing (local & network using condor).
- xxix) Viewer should support Visual change detection with Swipe / Blend / Flicker option and Software should have Inquire cursor and inquire box
- xxx) Software should support all the Indian satellite sensor models.
- xxxi) Software should have auto-geo referencing and auto-edge matching between images. Software should have Industry-standard Spectral, spatial & Radiometric enhancement tools.
- xxxii) Software should support full scale multispectral Classification tools (supervised, unsupervised, Knowledge engineer) and accuracy assessment tools.
- xxxiii) Software should support various Resolution merging techniques (Panchromatic & Multispectral).

The description given here is broad scope of work to be carried out by the contractor. However, any work even if not specifically mentioned but reasonably implied for the successful implementation and good performance of the system are deemed to be included.

**4.15** The software should have facility to show detail like longitude, latitude, altitude etc., & relevant attributes for departments system at any of the point on the digital map.

**4.16** The quantity for the scope of work is indicated in relevant Price Schedules of tender specification. The final quantities shall be based on actual data collection point through DGPS in existing alignment of the transmission lines. The actual quantities to be executed shall be decided by Site Engineer-in-charge during execution stage and the final quantities shall be as approved by Site Engineer-in-charge.

**4.17** The description given here is broad scope of work to be carried out by the bidder. However, any work even if not specifically mentioned but reasonably implied for the successful implementation and good performance of the system are deemed to be included in the scope of work.

**4.18** The Contractor must note that the *MPPTCL* shall not be responsible for loss or damage to properties, trees etc. due to contractor's work during survey. The

Contractor shall indemnify the *MPPTCL* for any loss or damage to properties, trees etc. during the survey work.

**4.19** The bidder shall give along with their bid clause by clause commentary indicating their confirmation / comments/ observation in respect of all clauses of technical specification.

**4.20** The work shall be carried out by the contractor using DGPS surveying equipments. The bidder shall indicate in his offer, the detailed description of the procedure to be deployed. The details of the equipment & facilities including software for image processing, computer aided tower spotting etc. available with the bidder or his associates shall also be furnished with the bid.

**4.21 Data Security:**

- a. The Agency / Bidder will come into a non-disclosure agreement with MPPTCL for all data – Digital or hard copy supplied for this work.
- b. Only authorized staff members are allowed to take back-up of data. The backup media is always kept at a place that is not accessible to any unauthorized staff.
- c. Data backup will be done only on one system that will be accessible only to the project leader. All backup will be encrypted.
- d. No removable media, such as CD reader/writers & FDD, are installed in any of the systems. Also, USB ports will be disabled in all the systems and wherever possible, the USB cables shall be removed. It is ensured that all removable media is removed before the system is sent for production.
- e. All systems should have a BIOS system level password in order to prevent anyone from changing the setup.
- f. No remote access will be provided to any of the computer.
- g. No data sharing will be allowed on any of the operators PC.
- h. All data in paper/CD/DVD or in any other form shall be retained by Department.
- i. Audits will be performed on a regular basis by authorized organizations.
- j. No Internet access shall be provided to any individual without prior permission from the Project Coordinator.
- k. E-mail access shall only be given to the Project Manager unless any requirement occurs.
- l. Grant access or remove access to any individual shall be given with permission of the Project Manager.
- m. No shared user IDs will be used.
- n. All physical networks like cables, routers and switches shall be inside the project zone.
- o. No sharing of password with anyone shall be allowed.
- p. No wireless technology with data transfer capabilities inside the project zone shall be allowed.
- q. Server shall have password protected screen saver.

- r. No writable media shall be found in the project zone except for the server where backup tapes/disks or other essential writable media are handled.
- s. **Only authorized and licensed software** shall be installed on workstations and Servers and those records shall be kept for all installed software.
- t. No visitors shall be allowed in the production area. In case of a visitor, the security guard will inform the concerned person about the visitor. Under no circumstances any visitor is allowed beyond the reception area.
- u. It is mandatory for all employees to wear their Photo ID card at all times in the office.
- v. No employee is allowed to enter the office without the Photo ID card. However, in case any employee forgets to carry his Photo ID card, he shall be required to call the Supervisor/ Shift-in-Charge.
- w. No material is allowed in or out of the office unless a gate pass is issued and verified. All the confidential documents, data backup of the organization are kept in a cabinet and the keys shall be available with Project Manager.

## **SECTION-V**

### **SPECIFICATIONS FOR ANNUAL MAINTENANCE CONTRACT**

#### **5. ANNUAL MAINTENANCE SERVICES:**

##### **MAINTENANCE & SUPPORT SERVICES**

The scope of work under annual maintenance contract shall include comprehensive maintenance of all the software and hardware provided by the contractor for the TAMS system delivered under the contract at SLDC and three Transmission Control Centers along with the future integration and support services for meeting the future requirement envisaged under this contract. The maintenance practices to be followed shall be as per ISO 2000 Standard. The essence of the maintenance and support services is to provide maintenance support for the hardware and software, with the goal of meeting the availability. The scope includes monitoring & Annual Security Audit of Cyber Security System from the CERT-In listed auditors. The Contractor shall also be responsible for Installation & regular Updation of Antivirus System for TAMS System.

##### **5.1 MAINTENANCE SUPPORT:**

The period of maintenance contract shall be five years from the date of completion of defect liability period. The MPPTCL may extend the duration of maintenance period for further period up to 2 years based on the same rates terms and conditions of the contract.

For all third party equipment (Hardware & Software), Contractor shall have back to back support along with supply of spare with appropriate response time from OEM Authorized representatives without any cost implication to the MPPTCL. Contractor shall be responsible for coordination with the OEM for all matters related to that equipment. The Contractor shall be responsible for meeting the overall response times and availability requirements specified in the Specification.

The maintenance of the System shall be comprehensive and shall comprise of the following category of works, which is further elaborated for each of the different subsystems:

- (a) Preventive Maintenance Activity (performance monitoring, system backup, patch management, updates, emergency response and troubleshooting).
- (b) Maintaining a minimum no. of spares.
- (c) Integration of new equipment.

##### **5.2 PREVENTIVE MAINTENANCE ACTIVITY:**

The preventive maintenance activity includes all activities to be performed by the Contractor to keep the system running at optimum level by diagnosis and rectification of all hardware and software failures and would broadly include :-

- Repair / replacement of defective equipments. The Contractor shall be responsible for repair/replacement of all the hardware for the various systems.
- Configuration of the replaced hardware and software, periodic routine checking as part of a preventive maintenance program, which would include checking of functionality of hardware and software.
- Monitoring of the performance of the system and doing necessary tuning for optimum performance to accommodate any changes such as addition of new components.
- Providing all necessary assistance to MPPTCL for addition and modification of database and displays Database sizing activities.
- Take Backup of the system at regular interval.
- Restoration of the systems upon its failure and to restore the functioning of the various systems.

Routine works like database building, and other such day-to-day operational activity, shall be referred to the contractor for support.

#### **5.2.1 HOURS OF COVER:**

The Contractor shall provide engineers who have experience and skill to maintain the TAMS system to the desired level of availability. The support personnel so deployed shall be qualified personnel having adequate experience.

Contractor and its personnel have to follow all rules and regulations of MPPTCL's office premises.

#### **5.2.2 SERVICE RESPONSE REQUIREMENTS:**

The severity levels are defined in coming sections and the requirement of response time for various severity levels is defined below:

Emergency Support for Severity 1 issues are to be provided 24 hours a day, seven days a week. The on-call support team shall include all key technical competencies so that any aspect of a system failure can be attended. The team shall comprise of experienced technical staff that are skilled in troubleshooting of the various systems covered under AMC. Severity 1 problems shall be reported by telephone for rapid response. For severity 1 problems, the key objective is to restore the system to an operational state as quickly as possible, including by a temporary workaround. Resolution of the defect may be completed during standard hours.

#### **5.2.3 MONITORING:**

The operation and performance of the various systems under AMC shall be monitored on a quarterly basis; the contractor shall review the following, analyze the results, and submit report. The contractor shall conduct at least the following monitoring.

#### **5.2.3.1. LOG MONITORING:**

- System logs for a selected day
- System history log
- Aggregate data collection
- Events Collection

During monitoring if any defect/ abnormality is found, the contractor shall undertake corrective maintenance for the same.

#### **5.2.3.2. RESOURCE MONITORING:**

Resource Monitoring services comprises checking the system's major node resources, gather log data, analyze results, and advise MPPTCL on the appropriate actions to be taken and undertake any agreed upon actions.

#### **5.2.3.3. CYBER SECURITY SYSTEM MONITORING:**

The Contractor shall also be responsible for monitoring of the cyber security system. The logs of the system shall be analyzed for exceptions and the possible incident of intrusion/ trespass shall be informed to the MPPTCL.

The monitoring shall encompass the various cyber security devices installed at Control Centre and Substations such as firewalls, Intrusion prevention system, routers etc.

**The Cyber security system shall also be subjected to Annual Security Audit from CERT-In listed auditors at the cost of the Contractor.**

#### **5.2.4 PATCH MANAGEMENT:**

The contractor shall also be responsible for providing updates/patches for the software products supplied under the project. All other patches of third party product like Operating System and Anti-virus shall be tested by the Contractor prior to installing in the network.

#### **5.2.5 PHYSICAL MAINTENANCE:**

The contractor shall undertake physical maintenance of all equipment/modules under the scope of this contract, in accordance with this section. The physical maintenance shall include cleaning, dusting, inspection of equipment for loose connections, damage to insulation, pest infections etc. as follows:

Activities shall include but not limited to:

- (a) Online diagnostics for servers and workstations - once every 3 months.
- (b) Connection test of LAN cables for identifying potential loose contacts in machines, switches and routers - once every 3 months.

### **5.3 SPARES INVENTORY:**

The Contractor shall maintain a spares inventory at each control centers at his own cost to meet the spare availability requirements of the system. The spares shall be used as and when required and no separate charges are payable except the maintenance charges. The Contractor shall decide the items and components to be maintained as spare and submit a list of Spares to be kept at the respective Control Centers. This shall be periodically verified by the MPPTCL and unavailability of spares shall be treated as non-availability as per severity 2. If spares has been used in the system then the replenishment of the spare should be done within 30 calendar days, otherwise it will be considered as non-availability.

#### **5.4 PROBLEM/ DEFECT REPORTING:**

The bidder shall submit an appropriate problem/defect reporting procedure to meet the requirement of all severity levels to get the approval of the same from MPPTCL.

The problems will be categorized as follows:

<b>Category</b>	<b>Definition</b>
Severity 1– Urgent	Complete system failure, severe system instability, loss or failure of any major subsystem or system component such as to cause a significant adverse impact to system availability, performance, or operational capability as described in specification.
Severity 2–Serious	Degradation of services or critical functions such as to negatively impact system operation. Failure of any redundant system component such that the normal redundancy is lost during working hours, Non-availability of spares, any other system defect, failure, or unexpected operation.
Severity 3 – General/Technical Help	Request for information, technical configuration assistance, "how to" guidance, and enhancement requests.

#### **5.5 SEVERITY LEVELS:**

The detail of the systems under different severity levels is as below:

##### **5.5.1.SEVERITY-1 (URGENT SUPPORT):**

This support is required when there is a complete system failure, severe system instability, the loss/ failure of any major sub-system / system or its components, which may significantly impact the system availability, performance, or operational capability at SLDC & Control centre. Following outages/disruptions will be considered under Serverity-1:

- Loss of Critical functionality as envisaged in specification due to any problem software/Hardware-related in TAMS system.
- Cyber Security issues.



- Loss of data exchange with other computer systems or other Control centers.

MPPTCL shall intimate the problem to the contractor. Upon receiving intimation, the representative of the contractor would immediately attend to the problem. The problem shall be attended by the contractor at the earliest, and it shall arrange all resources and take all steps to restore the data availability and functionality at the earliest.

**5.5.2.SEVERITY-2:**

The support services not defined under Severity-1 are included under this category. Coverage under this severity would be outages that do not immediately cause on line data loss but subsequently could result into Severity-1 category outage, loss of an important subsystem that may affect the day-to-day works and loss of archived data.

Following outages/disruptions will be considered under Serverity-2:

- Failure of server, stoppage of data collections for archiving and outage of other applications not covered under severity-1 are included in this category.
- Failure of any redundant system component affecting the critical redundancy like loss of any one Application Processor, CFE would also be included in this category.
- Non-availability of required inventory of spares.
- Problems like database reworking, failure of any one workstation would be covered under this severity.

**5.5.3.SEVERITY-3 (GENERAL TECHNICAL HELP):**

Request for information, technical configuration assistance, “how to” guidance, and enhancement requests are included under this category.

**5.6 RESPONSE AND RESOLUTION TIME:**

This section describes the target times within which the contractor should respond to support requests for each category of severity. The Action Resolution Time is the period from the acknowledgement of support request to the contractor delivering a solution subject to the Maximum time defined below. This period includes investigation time and consideration of alternative courses of action to remedy the situation. The Action is defined as a direct solution or a workaround.

<b>Severity</b>	<b>Action Resolution Time</b>	<b>Action</b>
<b>1</b>	Maximum 5 days from the date of	An urgent or emergency situation requiring continuous attention from necessary support staff until system Operation is restored – may be by workaround.

2	reporting	Attempt to find a solution acceptable to MPPTCL (dependent on reproducibility) as quickly as practical).
3		Report on the problem/query is to be Furnished.

**5.7 PAYMENT OF MAINTENANCE CHARGES:**

If the system software or Hardware or any part of TAMS project requires for proper running, not working and reported to the contractor, not repaired or not replaced within 5 days from the date of reporting to made ready & working of the whole project, 1% per instance shall be deducted from the AMC charges due for the Quarter.

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**SCHEDULE-I**  
**SUMMARY OF PRICES**

<b>Sr. No.</b>	<b>Particulars</b>	<b>Amount in ₹</b>
1	Total Price (excluding Goods and Services Tax) of Equipments and materials, Hardware & Softwares to be supplied for TAMS Scheme as per Schedule-I (A)	
2	Total Price (Goods and Services Tax) for Installation, Testing, Commissioning and implementation of TAMS Scheme as per Schedule-I (B)	
3	Total Price (Goods and Services Tax) for Annual Maintenance contract for 5 years as per Schedule-I (C)	
4	Sub Total (1+2+3)	
5	GST @ 18% on Sr. No. 4	
6	<b>Grand Total (4+5)</b>	

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**SCHEDULE- I (A)**  
**PRICE AND QUANTITY OF SOFTWARE AND EQUIPMENT FOR**  
**IMPLEMENTATION OF TAMS SCHEME**

No.	PARTICULARS	Unit	Qty	Unit FOR Destination Price (₹)			Total FOR Destination Price (₹)
				Unit Price	Freight Charges	Total	
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>8=5 +6 +7</b>	<b>9=4x8</b>
<b>A</b>	<b>FOR HQ / CONTROL CENTRES</b>						
<b>a.</b>	<b>SOFTWARE</b>						
<b>i</b>	Supply of Geospatial Web Server & Desktop Software as per Web GIS software capabilities mentioned in the Bid Document (One Server license + Four desktop license each)	Set	1				
<b>ii</b>	Multi user Mobile application software for maintenance Work Reporting integrated with TAMS (Android & Ios)	Set	1				
<b>iii</b>	Database server SQL server standard edition (One License)	Set	1				
<b>B</b>	<b>AT FIELD OFFICES:</b>						
<b>a</b>	<b>EQUIPMENT:</b>						
<b>i.</b>	Differential Global Positioning System (DGPS) with RTK and all accessories & associated software at field offices (The minimum configuration is indicated in Annexure- VII of Section-IV)	No.	01				
<b>ii.</b>	Hand held Differential Global Positioning System (DGPS) with all accessories & associated software at field offices (The minimum configuration is indicated in Annexure- VII of Section-IV)	No.	33				
<b>C</b>	Total (A+B)						

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**SCHEDULE- I (B)**  
**PRICE SCHEDULE TOWARDS SERVICES FOR INSTALLATION, TESTING,**  
**COMMISSIONING AND IMPLEMENTATION OF TAMS SCHEME**

Sl. No.	Description of work	Unit	Total Qty.	Charges for services (₹)	
				unit	Total
1	2	3	4	5	6=5x4
<b>A.</b>	<b>Field Work:</b>				
<b>i.</b>	Base Map preparation on 100 meter of both side of the transmission network covering villages, towns, cities, approach roads, National highways, express high way, rivers, terrain, hills, costal area, forest area, desert, dams etc. from Open Source freely available Satellite Imagery like Google/Bing or similar	<b>Sq Km</b>	<b>1300</b>		
<b>ii.</b>	Surveying for data collection using DGPS at each & every towers in the alignment of transmission lines and LT/HT/EHT electric lines, railway lines, water body, buildings/structures other than the line's towers, forest etc in Right of Way and establishment of GCP	<b>Km</b>	<b>13000</b>		
<b>iii.</b>	Development of the Sub-Station Land Utilization Plan (LUP) Map including Single Line Diagram (SLD) through DGPS survey upto a desired accuracy level and vectorization of the same on GIS layers with proper labelling and standard symbology so that area of the assets can be assessed on demand in metric units.	<b>No.</b>	<b>225</b>		
<b>B.</b>	<b>Installation, Testing, Commissioning, and implementation:</b>				
<b>a</b>	Development, Installation, Customization & Deployment of TAMS on Web server with Integration of existing ERP& SCADA	Job	1		
<b>b</b>	Integration of TAMS with ERP & SCADA	Job	1		
<b>c</b>	Development of Dash Board	Job	1		
<b>C i.</b>	Hosting of Towers, Transmission Lines & Substations in the Geo Portal, Development of geo-relation database for report generation, querying database in user-friendly manner, integration of data base on application software/s for analyzing & output as per MPPTCL's requirements	Job	1		
<b>ii.</b>	Security Audit of the Application for Hosting on NIC Server of as suggested by MPPTCL	Job	1		

<b>iii.</b>	Installation, Testing, Commissioning, and implementation of Mobile Application for all officers (meeting all requirements as per Section-I & Section-IV).	No.	1		
<b>iv.</b>	Onsite at least 02 days Training at 4 Location for Web GIS Application, Mobile Application and technique of DGPS Survey	No.	04		
<b>D.</b>	Total (1+2+3)				

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**SCHEDULE- I(C)**  
**PRICE SCHEDULE FOR ANNUAL MAINTENANCE SERVICES FOR TAMS (FOR HEAD QUARTER AND CONTROL CENTRES AND ALL FIELD UNITS)**

Sl. No	Description of work	Unit	Amount( ` )
1	2	3	4
<b>1</b>	Comprehensive AMC for all hardware /Web Application software / equipments installed under TAMS for 1 <sup>st</sup> Year after Defect Liability period	<b>LS</b>	
<b>2</b>	Comprehensive AMC for all hardware / Web Applicationsoftware / equipments installed under TAMS for 2 <sup>nd</sup> Year after Defect Liability period	<b>LS</b>	
<b>3</b>	Comprehensive AMC for all hardware / Web Applicationsoftware / equipments installed under TAMS for 3 <sup>rd</sup> Year after Defect Liability period	<b>LS</b>	
<b>4</b>	Comprehensive AMC for all hardware / Web Applicationsoftware / equipments installed under TAMS for 4 <sup>th</sup> Year after Defect Liability period	<b>LS</b>	
<b>5</b>	Comprehensive AMC for all hardware / Web Applicationsoftware / equipments installed under TAMS for 5 <sup>th</sup> Year after Defect Liability period	<b>LS</b>	
<b>6</b>	<b>Total (1+2+3+4+5)</b>		

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## ANNEXURE-I(A)

## EXISTING ENERGIZED EHV TRANSMISSION LINES

Zone	EHT(Maint) Circle	EHT(Maint) Division	400kV Transmission lines		220kV Transmission lines		132kV Transmission lines		TOTAL		
			Route Length in Km	No. of Towers	Route Length in Km	No. of Towers	Route Length in Km	No. of Towers	Route Length in Km	No. of Towers	
Central Zone	Bhopal	Bhopal	199	541	765	2493	1679	5772	2643	8806	
		Gwalior	0	0	796	2524	1680	5806	2476	8330	
		Itarsi	268	758	670	2252	1075	3896	2013	6906	
		<b>Sub Total</b>	<b>467</b>	<b>1299</b>	<b>2231</b>	<b>7269</b>	<b>4434</b>	<b>15474</b>	<b>7132</b>	<b>24042</b>	
East Zone	Jabalpur	Damoh	247	644	446	1462	1226	4068	1919	6174	
		Jabalpur	254	692	810	2687	1348	5122	2412	8501	
		Satna	0	0	938	3160	1424	5133	2362	8293	
		<b>Sub Total</b>	<b>501</b>	<b>1336</b>	<b>2194</b>	<b>7309</b>	<b>*3998</b>	<b>14323</b>	<b>6693</b>	<b>22968</b>	
West Zone	Indore	Indore	580	1696	1169	3853	3686	12512	5435	18061	
		Ratlam	266	719	706	2324	2748	9326	3720	12369	
		<b>Sub Total</b>	<b>846</b>	<b>2415</b>	<b>1875</b>	<b>6177</b>	<b>6434</b>	<b>21838</b>	<b>9155</b>	<b>30430</b>	
<b>G. Total</b>			<b>*1814</b>	<b>5050</b>	<b>*6300</b>	<b>20755</b>	<b>14866</b>	<b>51635</b>	<b>22980</b>	<b>77440</b>	
									<b>*Quantity covered in this Bid</b>		<b>13000</b>
									<b>Quantity covered in Pilot project (10% )</b>		<b>1300</b>



**ANNEXURE- I (B)**

**EXISTING ENERGIZED TRANSMISSION SUBSTATIONS**

WEST ZONE						CENTRAL ZONE						EAST ZONE							
Sl. No.	District	132kV	220KV	400kV	Total	Sl. No.	District	132kV	220KV	400kV	Total	Sl. No.	District	132kV	220KV				
1	Agar	3	1	0	4	1	Ashoknagar	4	1	0	5	1	Anoopur	2	1				
2	Alirajpur	1	0	0	1	2	Betul	7	2	0	9	2	Balaghat	5	0				
3	Barwaha	1	1	0	2	3	Bhind	7	2	0	9	3	Chhatarpur	5	1				
4	Barwani	6	2	1	9	4	Bhopal	10	4	1	15	4	Chhindwara	9	2				
5	Burhanpur	4	1	0	5	5	Datia	5	1	0	6	5	Damoh	5	1				
6	Dewas	10	1	0	11	6	Guna	7	1	0	8	6	Dindori	1	0				
7	Dhar	12	3	1	16	7	Gwalior	9	2	0	11	7	Jabalpur	9	3				
8	Indore	17	3	1	21	8	Harda	2	0	0	2	8	Katni	4	1				
9	Jhabua	3	0	0	3	9	Hoshangabad	8	4	0	12	9	Mandla	3	0				
10	Khandwa	6	1	1	8	10	Morena	9	2	0	11	10	Narsingpur	6	2				
11	Khargone	9	1	0	10	11	Raisen	6	2	0	8	11	Panna	2	0				
12	Mandsaur	6	2	0	8	12	Rajgarh	1	0	0	1	12	Rewa	7	2				
13	Neemuch	5	1	0	6	13	Rajgarh b	6	1	0	7	13	Sagar	5	2				
14	Rajgarh	3	1	0	4	14	Sagar	2	1	1	4	14	Satna	8	3				
15	Ratlam	7	1	0	8	15	Sehore	7	2	1	10	15	Seoni	3	1				
16	Shajapur	12	2	0	14	16	Sheopur	3	0	0	3	16	Shahdol	2	0				
17	Ujjain	13	5	1	19	17	Shivpuri	5	1	0	6	17	Sidhi	3	1				
Total (WZ)		118	*26	*5	149	18	Vidisha	6	2	0	8	18	Singrouli	5	0				
								<b>Total (CZ)</b>				<b>104</b>	<b>*28</b>	<b>*3</b>	<b>135</b>	19	Tikamgarh	6	1
																20	Umariya	2	1
																<b>Total (EZ)</b>		<b>*92</b>	<b>*2</b>

**Total Substations: 399 No. (132kV – 314 No., 220kV – 76 No. & 400kV - 9 No.)**

**\*No. of Substations covered in this Bid-225 Nos., Quantity for Pilot Project-23 Nos.**

**ANNEXURE-II**

**QUANTUM OF WORK TO BE CARRY OUT FOR DGPS FIELD SURVEY OF EXISTING ENERGIZED EHV TRANSMISSION LINES AS A PILOT PROJECT**

<b>S. No</b>	<b>Name of line In Which GPS Survey is Required</b>	<b>Route Length (In Km)</b>	<b>Total Tower</b>
1	132kV DCDS Betul-Gudgaon line (220kV S/s Betul to loc. no. 7)	12	<b>42</b>
	Loc. no. 7 to 132kV S/s Gudgaon	44	<b>148</b>
2	132kV DCSS Badnagar-Kanwan line	21	<b>68</b>
3	132kV Jhabua - Meghnagar line	26	<b>88</b>
4	132kV Rajgarh(D)220 - Jhabua	68	<b>257</b>
5	132kV Rajgarh(D)220 - Petlawad	54	<b>192</b>
6	220kV Nagda - Neemach line	136	<b>405</b>
7	132kV Neemuch - Mandsaur line	51	<b>175</b>
8	220kV Ratlam - Daloda line	75	<b>243</b>
9	132kV Alot - Sitamau line	44	<b>141</b>
10	132kV Sidhi220 - Mauganj	44	<b>143</b>
11	132kV Maihar - Amarpatan line	26	<b>91</b>
12	132kV Birsinghpur - Shahdol line	45	<b>172</b>
13	a) 220kV Ujjain - Badod line (220kV S/s Ujjain to loc. no. 239)	75	<b>239</b>
	b) Loc. no. 239 to 220kV S/s Badod	4	<b>13</b>
14	220KV Ujjain-Nagda line	51	<b>168</b>
15	132kV Susner-Jeerapur line	31	97
16	132kV Agar-Susner line	32	<b>107</b>
17	132kV Ujjain-Tarana line	26	<b>87</b>
8	132kV Ujjain-Badod line	110	<b>21</b> <b>1</b>
9	132kV Agar LILO line	16	<b>53</b>
	132kV Tarana - Makdon line	24	<b>76</b>
20	132kV Nalkheda - MomanBadodiya line	29	<b>93</b>
21	132kV Agar - Susner line	32	<b>107</b>
22	132kV Mahidpur - Zarda line	24	<b>78</b>
23	132kV Ashta220 - Ichhawar line	35	<b>116</b>
24	132kV Sabalgarh220 - Vijaypur line	32	<b>107</b>
	<b>TOTAL</b>	<b>1167</b>	<b>3717</b>

## Full Specification of 'Handheld DGPS'

Sl. No.	Required Specifications
<b>A.</b>	<b>Specifications for Equipment:</b>
	<b>Handheld GPS L1 code Receiver with inbuilt camera, colored touch screen display and post processing capability to achieve 1-3m of horizontal accuracy.</b>
a.	MS Windows Mobile based operating system
b.	The system should be capable of running third party GIS field data collection software.
c.	3.5in sunlight readable display with touch screen.
d.	Built in memory of minimum 2GB with RAM 256 MB or more with external memory expansion for SD card. The receiver should have min of 800MHZ processor.
e.	Inbuilt camera with minimum 3 megapixel with geotagging functionality.
f.	Real time map display with color graphics.
g.	Minimum 12 channels or more.
h.	Operating Temperature: -20 °C to 60 °C
i.	Should have Internal rechargeable battery with at least 10+ hours of field operation capability
j.	Should have integrated Bluetooth, Wireless LAN, Mini USB
k.	Should have password protection option
l.	Units should be serviceable in India.
m.	Should be mounted on vehicle
<b>B.</b>	<b>Specification for GIS field data collection Software:</b>
a.	Should run on Microsoft Windows Mobile operating system.
b.	Should be capable of:
i.	Collecting data for a GIS or spatial data base
ii.	Navigating in the field
iii.	Data captured should be post processing capability.
c.	Should be able to capture feature codes and attributes in the field.
d.	Should have real time map display capability.
e.	Should have support for in-field mission planning with Planning, sky plot and DOP graph, making it easy to find best time to collect quality data.
f.	Provide audio and visual warnings and alarms for loss of GPS position.
g.	Support point offsets including distance-bearing, bearing-bearing, triple bearing, distance-distance and triple distance offset types.
h.	Should support laser rangefinders
i.	Should have the facility of taking offsets in the field manually.
j.	It should be possible to segment a line i.e. record a continuous line with various segment with different attributes values.
k.	It should also be possible to manually create features by entering coordinates

Sl. No.	Required Specifications
<b>C.</b>	<b>Specification for Post Processing/Desktop Software:</b>
	<b>Included desktop software should be able to post process the GPS data to improve the positional accuracy.</b>
a.	Import background maps such as satellite imagery, remote sensing images, Aerial photographs, and vector maps.
b.	Support GIS data export and import.
c.	Should be capable of reviewing and editing the data.
d.	Support different datum transformations
e.	Should import data formats like AutoCAD dxf, ESRI shapefiles, Microsoft Access MDB, etc
f.	Should be capable of exporting data to standard formats like AutoCAD DXF, ESRI Shape file, Google Earth KML and KMZ, Microsoft Access MDB, etc
g.	Should support base file format like Hatanaka(Compressed RINEX), RINEX
h.	Should also support compressed base file formats like GZip(.gz) and ZIP (.zip).
i.	Should be capable of downloading the base data from IGS base stations over the internet.
j.	Facility to convert the data to RINEX.
k.	Should have online help.
l.	Should have the ability to create data dictionary with different point, line and area features with different conditional attributes.
m.	Should have the module to create/establish local co-ordinate system and export to the field device
n.	Should be capable of transferring data to and from the field device.

**Note: Above specifications are indicative for minimum requirement. The equipment with advance features would be preferred.**

**ANNEXURE-IV**

**REQUIRED SPECIFICATIONS AND THE MINIMUM CONFIGURATION FOR DIFFERENTIAL GLOBAL POSITIONING SYSTEM (DGPS) WITH RTK AND ALL ACCESSORIES & ASSOCIATED SOFTWARE**

**A. Differential Global Positioning System (DGPS) with RTK:**

<b>SL. NO.</b>	<b>PARTICULARS</b>	<b>REQUIRED SPECIFICATION</b>
1.	Make and Model	Must be mentioned with Technical Specifications.
2.	Receiver must have	Minimum 110 channels for tracking GPS full phase, Code (C/A, P, C) and GLONASS full phase, Code (C/A, P narrow code) and provision for future frequencies or better.
3.	Antenna	Both Base and Rover should have Geodetic Antenna, with latest GNSS technology to track satellites under difficult conditions like low elevation satellites and dense canopy or better.
4.	Accuracy in DGPS Post Processing Mode	<input type="checkbox"/> Base line RMS of 3 mm + 0.5 ppm in static (phase) mode for Horizontal and 4mm + 0.5 ppm for vertical with long observation or better. <input type="checkbox"/> 5mm + 0.5 ppm for horizontal and 10 mm + 0.5 ppm for vertical in rapid static mode or better.
5.	Accuracy with DGPS Real Time Operations	10mm + 1ppm for Horizontal and 20 mm + 1 ppm for vertical in kinematic (Phase) mode after initialization or better.
6.	Position update rate	Must be 5 Hz or better
7.	Data Recording rate	Must be selectable from 0.2 Sec (5 Hz) to 300 sec or better
8.	Data Storage	SD Card Slot, Capacity not less than 1 GB, System should support a memory of 1 GB without controller.
9.	Power Source	Rechargeable Li-ion plug in <b>hot swappable</b> batteries for continuous operation of 10-12 hours or more, with facility to attaching external battery/car battery. Suitable quick charger should also be quoted
10.	Controller/ Terminal:	Both base and Rover must have identical, separate Control Unit/Terminal with full alphanumeric keyboard and (VGA) color TFT, Touch Screen, Sunlight readable, LED back light display, showing real time map of all the points, lines and polygons captured in the field. The keyboard must have additional user selectable hot function keys for accessing frequency used functions. Controller can be connected with Receiver by cable or Blue tooth. It must have integrated megapixel camera. Internal memory for software and data storage for atleast 1 GB and external data storage slots for (SD card), RS232 port, Mini USB slot and Power jack Option.
11.	General Features	<ul style="list-style-type: none"> <li>➤ Base and Rover Units must be completely interchangeable.</li> <li>➤ GPS must have facility for on-board RINEX data logging.</li> <li>➤ Suitable for field use in rugged terrains and extreme weather conditions.</li> <li>➤ Continuous independent check of ambiguity search algorithm.</li> </ul>

SL. NO.	PARTICULARS	REQUIRED SPECIFICATION
		<ul style="list-style-type: none"> <li>➤ The system must have facility to create user defined co-ordinate systems with user defined ellipsoid &amp; user defined Projection in order to generate Transformation parameters to change from one co-ordinate system to another in the receiver itself.</li> <li>➤ The data format must be such that data from DGPS and Electronic Total Station can be exchanged simply by exchange of SD Card. Support for dxf files in background maps.</li> </ul>
12.	Data Processing Software	<ul style="list-style-type: none"> <li>➤ Post processing software must be able to process data for both Static and Real Time modes.</li> <li>➤ The software must have the following options: <ul style="list-style-type: none"> <li>• Facility for Network Adjustment.</li> <li>• Changing of datum and transformation.</li> <li>• View and edit of Map.</li> <li>• Averaging of both GPS and Total Station data.</li> <li>• Software should be capable of managing DGPS, Total Station and Digital level data.</li> </ul> </li> </ul>
13.	Radio Modem:	<ul style="list-style-type: none"> <li>➤ The System must include Radio modems of higher output for Base station along with radio modem for Rover unit, with cable and other accessories.</li> <li>➤ 25/35 watt high power radio must be provided at Base to carry signals for at least 5 km in hilly terrain.</li> <li>➤ Additional repeater radio must be provided along with Antenna mast of at least 5 mts for Base and repeater along with cable and any other accessories.</li> </ul>
14.	Additional Requirements	<ul style="list-style-type: none"> <li>➤ Training must be provided for maximum of 05 days.</li> <li>➤ The supplier must have fully equipped Service Centers located all around India to provide prompt after sales support, field demonstration of data acquisition and data processing capabilities and technical support whenever needed with minimum downtime.</li> </ul>
15.	Accessories Required	<ul style="list-style-type: none"> <li>➤ Tripod set up for Base and Rover for Static mode data collection.</li> <li>➤ Pole and backpack set up for Rover for RTK data collection.</li> <li>➤ All accessories, batteries, charger, Memory card, cables, adaptors etc. required for static and RTK mode operation should be supplied.</li> <li>➤ Radio modems for Base and Rover along with antenna, cables, must etc as stated above must be provided.</li> <li>➤ All accessories from the OEM.</li> </ul>
16.	<b>NOTE: THE OFFERED ITEM SHOULD BE OF INTERNATIONALLY REPUTED BRAND MAKE. LESSER KNOWN BRAND OR ASSEMBLED OR LOCAL MAKE WILL NOT BE CONSIDERED FOR PURCHASE.</b>	

**B. Configurations of Software (1 complete set of original software's to be supplied with each receiver) :**

- ❖ Observation configuration software with Precision Time snapping Tool during the observation on all the versions of windows.
- ❖ Data downloading software must be compatible on all the versions of windows.

- ❖ Appropriate baseline processing software sufficient to achieve the desired accuracy.
- ❖ Software must be capable of processing all types of satellite data in dual frequency mode.
- ❖ Must have full mission planning software to provide full information on, and plots of: Satellite visibility PDOP & GDOP Satellite azimuth & elevation.
- ❖ Automatic data processing on different measuring modes i.e. Static/Fast or Rapid Static Kinematics Stop & Go/Kinematics Continuous.
- ❖ Non system specific, No Software key & No LAN requirement for running of the software.
- ❖ Software should be interactive.
- ❖ Output of full statistical data with result to enable analysis of data quality.
- ❖ Capable of importing and exporting RINEX format data.
- ❖ Facility for creation and application of user defined ellipsoid.
- ❖ Processing software should have the capability to process raw data of different sampling time interval.
- ❖ One set of original software on CD.
- ❖ Full set of software manuals.
- ❖ Upgrades/upgrade/new version to be supported free of cost alongwith training throughout the service life of the instrument.
- ❖ Each GNSS Set includes receiver, antenna, controller, all accessories, software's, manualsetc.
- ❖ All accessories supplied along with should be of same OEM make as that of Instrument.
- ❖ Maximum Downtime: 30days.

**C. Training** will have to be imparted at least 2 weeks by the Vendor to eight persons at Consignee's place in Madhya Pradesh free of cost within one month from the date of purchase.

**D. Technical Evaluation:**

*Instruments precision and accuracy of the result shall be checked against the standard base line (about 50K.M).*

**E. Warranty and maintenance agreement:**

- Minimum 5 years warranty is required.
- In case of supplier fails to rectify the System within 7 days from the date of filing the complaint, alternate System should be provided as a stand by the supplier during the warranty period.

**Note: Above specifications are indicative for minimum requirement. The equipment with advance features would be preferred.**

SCHEDULE-2  
**COMMERCIAL QUESTIONNAIRE**

The Bidder may please note that submission of this Questionnaire duly and properly filled-in is essential. While filling in entries against the questions given below, no reference should be made to comments entered elsewhere in the tender. All queries should be answered and these answers should be complete in themselves. Please note that none of the column should be left blank and clear reply against all column should be furnished. In case this is not done the offer will be liable for rejection.

<b>S. No.</b>	<b>Particulars</b>	<b>Answers</b>
1	Name and address of Bidder.	
2	Communication	Phone (O) Phone (R) Mobile FAX No.
3	(i) Whether you are State/Central Undertaking/Unit with 00% Government share.(Yes/No) (ii) If yes whether documentary evidence in support of the above has been enclosed.(In absence of documentary evidence your claim to be State/ Central Govt. Undertaking shall be ignored).	
4	What is the validity period of your offer (the offer should be valid for a minimum period of 5 months).	
5	Whether the required Earnest Money has been furnished by you (Yes/No). If yes, (i) In which form. (ii) Amount of Earnest Money furnished.	
6	Whether agreeable to Company's penalty clause; (Yes/No)	
7	Whether agreeable to payment clause (Yes/No)	
8	Are you agreeable to payment procedure defined in the tender (Yes/No)	
9	Whether any rebate has been offered (Yes/No) i) If yes, how much ?	
10	Whether agreeable to the completion period offered (Yes/No)	
11	Whether agreeable to furnish security	



	deposit in the form as indicated in the tender (Yes/No)	
12	Whether agreeable to FIRM prices for DGPS survey work and associated activities(Yes/No)	
13	Have you attached Income-Tax clearance certificate for the last three years (Yes/No).	
14	Whether a list of orders executed by you enclosed with full particulars of nature of work done (Yes/No)	
15	Whether certificate of competent authority as a proof of having successfully completed orders has been furnished (Yes/No).	
16	Have you furnished photo copy of the Registration number of GST allotted to you in respect of the DGPS survey works& associated activities?	
17	Whether details of technical manpower of head office & field organisation furnished (Yes/No)	
18	Have you furnished the power of attorney in respect of the person signing the tender on behalf of tender	
19	(i) Whether your firm is partnership firm (Yes/No) (ii) If so, indicate the name(s), complete address and designation of al	
20	Whether profit and loss account and audited financial statements of accounts (by Chartered Accountant) for the last 3 years have been furnished by you (Yes/No)	
21	Whether you agree to clause for arranging equipments, T&P and vehicles (Yes/No)	
22	Please clarify your stand on GST thereon: i). Whether applicable on survey work covered in this tender?(Yes/No) ii). If applicable, please indicate the rate for GST. iii). Please indicate if applicable GST are included in your quoted rates. iv). If chargeable extra from the MPPTCL the same should be clearly stated alongwith the rate. v) Whether GST is creditable through reverse charge mechanism?(Yes/No)	
23	Whether check-list has been enclosed (Yes/No).	

DATE :  
PLACE :

Signature :  
Name :  
Status :  
Seal of the :  
Tendering Co./ Firm :

NOTE:- (i) The Bidder may use above questionnaire sheets in original for furnishing reply alongwith his offer. However, if separate sheets are used for this questionnaire it may please be ensured that the serial order and language of questions is maintained.

(ii) The Bidder shall necessarily depute the authorised representative who should be present on due date and time of opening of tender. This representative should be authorised signatory of Bidder and should furnish reply on Bidder firm's letter head in case of clarification, if any, sought on the offer after tender opening, if requested. The offer shall be rejected in case the aforesaid instructions are not complied.

### **SCHEDULE-3**

#### **LIST OF PASTWORKS CARRIED OUT**

(Separatesheet to be submitted for each completed work)

S.No.	Particulars	
1	Name of the Project	
2	Name and address of the order placing authority	
3	Order No.& date.	
4	Value of the order.	
5	Scope of work in the project.	
6	Quantum of work in the Project:-	
a.	Whether Handled the project with GIS services?(Yes/No)	
b.	Towns for Electrical Network/Pole Survey (GPS/DGPS/ GIS survey) across India(Nos.)	
c.	Electrical Asset Survey of HT and LT (up to 33kV) Network survey in total using GPS/DGPS/GIS (Circuit Km)	
d.	Electrical Asset Survey EHT Transmission lines Network (66kV & above) survey in total using GPS/DGPS/GIS (Circuit Km)	
e.	Whether developed mobile apps in different Platforms (Yes/No)	
f.	Whether developed and implemented Web GIS for the scope of work under the current RFP for monitoring and management of Transmission line asset? (Yes/No)	
7	Numbers of Geo-coding using DGPS	
8	Geo-referencing & GIS mapping done with friendly user system	
9	Completion period.	
10	Actual completion period.(indicate month & year)	
11	Remarks.	

Date:

Signature :  
Name :  
Status :  
Seal of the :  
Tendering Co.

Note:-Experience as sole bidder/partner in JV shall only be considered. Certificate from Power utility/User agency is required to be submitted.Experience as sub-contractor shall not be considered.

**STATEMENT-4 (A)**

*Financial Information of the Bidders*

*(in case of JVA, the information shall be submitted separately in respect of each partner of the JVA)*

Bidder's \_\_\_\_\_ Legal Name: \_\_\_\_\_  
Date: \_\_\_\_\_

JVA Partner's Legal Name: \_\_\_\_\_

Information in respect of M/s \_\_\_\_\_

**All**

**Amount in INR**

No.	Particulars	(Notes no. of Balance sheet considered)	As per the Tender Document FY.....
	Part-A		
1.	<b>Total Assets</b>		
2.	<b>Total outside Liabilities</b>		
3.	Net Worth (1-2)		
	Part-B		
4.	<b>Current Assets</b>		
5.	<b>Stock / Inventories</b>		
6.	<b>Prepaid Expenses</b>		
7.	<b>Contractual Advance payment liability</b>		
8.	Liquid Assets (4-5-6-7)		

**Information from Profit & Loss Statement for Previous Three(3) or Five(5) Years as per the Tender Document**

Part-C	Year 1 Y F Y..... ..	Year 2 Y F Y..... ..	Year 3 Y F Y..... ..	Year 4 Y F Y..... ..	Year 5 Y F Y..... ..	Item no. of Profit & Loss Account Considered for Calculating Figures
8. <b>Total Turnover</b>						
9. <b>Average</b>						

	Turnover (considering best 3 years)	
<p><b>Attached are copies of Financial Statements (Balance Sheets, including all related notes, and income statements ) for the years required above complying with the following conditions:</b></p> <ul style="list-style-type: none"> <li>• <b>All such documents must reflect the financial information of the bidder or partner to a JVA, and not sister or parent companies.</b></li> <li>• <b>Historic financial Statements must be audited by the Statutory Auditor. In case the bidder does not have a statutory auditor, then it should provide the certificate from a chartered Accountant that ordinarily audits the annual accounts of the bidder.</b></li> <li>• <b>Historic financial Statements must be complete, including all noted to the financial Statements.</b></li> <li>• <b>Historic financial Statements must correspond to accounting periods already completed and audited (no statements for partial periods shall be requested or accepted, until allowed in tender).</b></li> </ul>		

Certificate by Statutory Auditor  
Or  
Chartered Accountant

Date :  
Place:

Name of Audit Firm  
Firm Reg. No.

**Schedule-4 (B)**

Date...../...../ .....

**BANK CERTIFICATE**

This is to certify that M/s \_\_\_\_\_ having its registered office at \_\_\_\_\_ (full address) and Branch office at \_\_\_\_\_ (full address) who have submitted their Bid to Madhya Pradesh Power Transmission Co. Ltd., Jabalpur against their tender specification vide reference number Tender No. \_\_\_\_\_ (\_\_\_\_\_) and Tender No. \_\_\_\_\_ (\_\_\_\_\_) is our customer for the past \_\_\_\_\_ years.

Their financial transactions with our Bank have been satisfactory. They enjoy the following FUND BASED based LIMITS with us against which the extent of utilization as on date is also indicated below:-

<b>S.No.</b>	<b>Type of facility</b>	<b>Sanctioned limit as on date</b>	<b>Utilization as on date</b>
1	Cash Credit		
2	Overdraft		
3	Working Capital Loan		
	TOTAL		

This is to certify that such loans, which has been sanctioned for the purpose other than working capital, has been considered above.

This letter is issued at the request of M/s \_\_\_\_\_

Name of Bank

\_\_\_\_\_

Name of authorized

Signatory \_\_\_\_\_

Designation

\_\_\_\_\_

Phone/ Mob. No.

\_\_\_\_\_

Address:

\_\_\_\_\_

Seal of

the Bank \_\_\_\_\_

SCHEDULE 4-C(1)

**LIST OF SIMILAR WORKS SATISFYING QUALIFICATION  
CRITERION COMPLETED DURING THE LAST 5 (FIVE) YEARS**

S. No.	Client's Name and Address	Name of the Work & Location	Scope of work carried out by the bidder	Agreement/Letter of Award No. and date	Contract Value		Date of start	Date of completion		Reasons for delay in completion if any	Ref. of document (with page no.) in support of meeting Qualification Criterion
					Awarded	Actual on completion		As per LOA/Agreement	Actual		

**Date**

**SIGNATURE:  
NAME:  
STATUS:  
SEAL OF THE BIDDER**

SCHEDULE 4-C(2)

**LIST OF SIMILAR TYPE OF WORKS OTHER THAN ELECTRIC LINES  
COMPLETED DURING THE LAST 5 (FIVE) YEARS**

S. No.	Client's Name and Address	Name of the Work & Location	Scope of work carried out by the bidder	Agreement/Letter of Award No. and date	Contract Value		Date of start	Date of completion		Reasons for delay in completion if any	Ref. of document (with page no.) in support of meeting Qualification Criterion
					Awarded	Actual on completion		As per LOA/Agreement	Actual		

**Date**

**SIGNATURE:**

**NAME:**

**STATUS:**

**SEAL OF THE BIDDER**

Note:

1. In support of having completed above works, attach self-attested copies of the completion certificate from the owner/client or Executing Agency /Consultant appointed by owner/ Client indicating the name of work, the description of work done by the Bidder, date of start, date of completion (contractual & actual) and contract value as awarded and as executed by the Bidder. "Contract Value" shall mean gross value of the completed work including cost of materials supplied by the owner/client but excluding those supplied free of cost.
2. Information must be furnished for works carried out by the Bidder in his own name or proportionate share as member of a Joint Venture. In the latter case details of contract value including extent of financial participation by partners in that work should be furnished.
  3. If a Bidder has got a work executed through a Subcontractor on a back to back basis, the Bidder cannot include such a work for his satisfying the Qualification Criterion even if the Client has issued a Completion Certificate in favour of that Bidder.
  4. Use a separate sheet for each partner in case of a Joint Venture.
  5. Only similar works completed during the last 7 years prior to the last stipulated date for submission of Bid, which meet the Qualification Criterion need be included in this list.



**SCHEDULE-5**

**DETAILS OF HEADQUARTER AND FIELD ORGANISATION**  
(Particulars of skilled/unskilled manpower, Computer details)

<b>Designation</b>	<b>Name</b>	<b>Qualification</b>	<b>Experience</b>		<b>Total No</b>
Project Manager					
Team Leader					
Team Member					
AutoCAD, GIS & IT Expert					
Professional Surveyors					
Field Assistants					
Others if any					
Computers	Brand	Configuration	Year of purchase along with purchase order copy		STATUS

**Date**

**SIGNATURE:**  
**NAME:**  
**STATUS:**  
**SEAL OF THE BIDDER**

**SCHEDULE-6**

**DETAILS ABOUT POSSESSION OF INSTRUMENTS AND SOFTWARE AND VEHICLES WITH THE BIDDER[**

**a. Details instruments and other T&P :**

<b>Sl. No.</b>	<b>Name of instrument</b>	<b>Make and modelno. of instrument</b>	<b>Accuracy/ Specification</b>	<b>Year of purchase</b>	<b>Remark</b>

**b. Details of software associated with instruments and others required for post data processing, application etc.:**

<b>Sl. No.</b>	<b>Name of the software</b>	<b>Year of purchase</b>	<b>Purchase order copy</b>	<b>Version</b>	<b>License Number</b>	<b>Remarks</b>

**c. Details of Vehicle.:**

<b>Sl. No.</b>	<b>Make</b>	<b>Year of purchase</b>	<b>Registration No.</b>	<b>Capacity</b>	<b>Purchase order copy</b>	<b>Remarks</b>

**Date**

**SIGNATURE:  
NAME:  
STATUS:  
SEAL OF THE BIDDER**

## SCHEDULE-7

### CHECK-LIST

Sr. No.	Item	Reference	Declaration (strick-out whichever is not applicable)
1	Earnest Money Enclosed	-	Yes / No
2	Tender-form duly signed	-	Yes / No
3	Offer form (Price Schedule)( <b>on line</b> )	Schedule-1	Yes / No
4	Questionnaire enclosed duly filled-in.	Schedule-2	Yes / No
5	List of past survey works carried out	Schedule-3	Yes / No
6	Financial information of the bidder	Schedule-4(A)	Yes / No
7	Bank certificate	Schedule-4(B)	Yes / No
8	Details of survey work of lines using modern technique which are under execution	Schedule-4(C)	Yes / No
9	Details of Headquarter & field organization	Schedule-5	Yes / No
10	List of Tools & Plants, vehicle available with the Bidder	Schedule-6	Yes / No
11	ISO 9001:2008 Certification from authorized certification body	-	Yes / No
12	Understanding of Statement of Work (SOW) and Methodology Write up	-	Yes / No
13	Power Point Presentation of Project Roadmap, Implementation approach & Methodology	-	Yes / No
12	Check list	Schedule-7	Yes / No

Signature :

Name :  
Status :  
Seal of the:  
tendering Co./Firm :

**Proforma for Earnest Money Bank Guarantee**  
**(To be executed on non-judicial stamp paper of appropriate legal value**  
**affixing revenue stamp worth Rs. 1/-)**

**..... Bank's Name and Address of Issuing Branch or Officer.....**

**Beneficiary: Regional Accounts Officer, MPPTCL, Jabalpur**  
.....

**Date: .....**

**Bank Guarantee No: .....**

We have been informed that... ***name of the Bidder.....***(hereinafter called "the Bidder") has submitted to you its offer dated.....(hereinafter called "the offer") for the execution of ***.....name of contract.....***under Tender specification No. T-.....

Furthermore, we understand that, according to your conditions, offers must be supported by an EMD Bank Guarantee.

At the request of the Bidder, we ***.....name of Bank.....***hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount ***.....amount in figures....(..... amount in words.....)***upon receipt by us of your first demand in writing accompanied by a written statement stating that the Bidder is in breach of its obligation(s) under the tender conditions because the Bidder:

- (a) has withdrawn its offer during the period of validity specified by the Bidder in his offer; or
- (b) does not accept the correction of errors in accordance with the Instructions to Bidders; or
- (c) having been notified of the acceptance of its offer by the Purchaser during the period of validity, (i) fails or refuses to execute the Contract Agreement, or (ii) fails or refuses to furnish the Performance Security, in accordance with the Tender specification NO. T-.....

This guarantee will expire: (a) if the Bidder is the successful Bidder, upon our receipt of copies of the Contract Agreement signed by the Bidder and the performance security issued to you upon the instruction of the Bidder; and (b) if the Bidder is not the successful Bidder, upon the earlier of (i) our receipt of copy of your notification to the Bidder of the name of the successful Bidder; or (ii) twenty-eight days after the expiration of the validity of Bidder's offer. Consequently, any demand for payment under this guarantee must be received by us at the office on or before that date.

**.....Bank's seal and authorized signature(s).....**

Note:- All italicized text is for use in preparing this form and shall be deleted from the final document.

**FORMAT: 1**

**FORMAT FOR UNDERTAKING BY THE JOINT VENTURE PARTNERS**

*(To be executed on Non-Judicial Stamp Paper worth ` 250.00&` 1.00 revenue stamps)*

THIS JOINT DEED OF UNDERTAKING executed on this..... day of..... Two Thousand and..... by ..... a company incorporated under the laws of ..... and having its Registered Office at .....(hereinafter called the "Party No.1" which expression shall include its successors, executors and permitted assigns) and M/s.....a company incorporated under the laws of .....and having its Registered Office at ..... (Hereinafter called the "Party No.2" which expression shall include its successors, executors and permitted assigns) and M/s.. . . . .a Company incorporated under the laws of ..... and having its Registered Office at .....(hereinafter called the "Party No.3" which expression shall include its successors, executors and permitted assigns) for the purpose of making a bid and entering into a contract [hereinafter called the "Contract"{in case of award}] against the Specification No **TR-47/2018** for ..... (*insert name of the project*) .....

of M. P. Power Transmission Co. Ltd, a Company incorporated under the Companies Act of 1956 having its registered office at Block No. 2, Shakti Bhawan, Rampur, Jabalpur (hereinafter called the "MPPTCL").

WHEREAS the Party No.1, Party No.2 and Party No.3 have entered into an Agreement dated ----- AND WHEREAS the MPPTCL invited bids as per the above mentioned Specification for the design, manufacture, supply, erection, testing and commissioning of Equipment/ Materials for TAMS System and Annual Maintenance Contract ( hereinafter called the "AMC") stipulated in the bidding documents under ..... (*insert name of the project*) .....

AND WHEREAS Qualification Criteria of the specification stipulates that an Undertaking of two or more qualified manufacturers as partners, meeting the requirements of Qualification Criteria, as applicable may bid, provided, the Joint Venture fulfills all other requirements of Qualification Criteria and Amendment issued vide No. \_\_\_\_\_ dtd. \_\_\_\_\_ and in such a case, the Bid Forms shall be signed by all the partners so as to legally bind all the Partners of the Joint Venture, who will be jointly and severally liable to perform the Contract and all obligations hereunder.

**The above clause further states that this Undertaking shall be attached to the bid and the Contract performance guarantee will be as per the format enclosed with the bidding document without any restrictions or liability for either party.**

AND WHEREAS the bid is being submitted to the Purchaser vide proposal No.....dated ..... by Party No.1 based on this Undertaking between all the parties; under these presents and the bid in accordance with the requirements of Tender specification & Qualification Criteria an Amendment dtd. \_\_\_\_\_, has been signed by all the parties.

NOW THIS UNDERTAKING WITNESSETH AS UNDER:

In consideration of the above premises and agreements all the parties of this Deed of Undertaking do hereby declare and undertake:

- 1.** In requirement of the award of the Contract by the MPPTCL to the Joint Venture Partners, we, the Parties do hereby undertake that M/s..... the Party No.1, shall act as Lead Partner and further declare and confirm that we the parties to the Joint Venture shall jointly and severally be bound unto the MPPTCL for the successful performance of the Contract and shall be fully responsible for the design, manufacture, supply, erection, testing, commissioning and successful performance of the equipment/ material and AMC in accordance with the Contract:
- 2.** In case of any breach or default of the said Contract by any of the parties to the Joint Venture, the party(s) do hereby undertake to be fully responsible for the successful performance of the Contract and to carry out all the obligations and responsibilities under the Contract in accordance with the requirements of the Contract.
- 3.** Further, if the MPPTCL suffers any loss or damage on account of any breach in the Contract or any shortfall in the performance of the equipment/ material in meeting the performances guaranteed as per the specification in terms of the Contract, the Party(s) of these presents undertake to promptly make good such loss or damages caused to the MPPTCL, on its demand without any demur. It shall not be necessary or obligatory for the MPPTCL to proceed against Lead Partner to these presents before proceeding against or dealing with the other Party(s), the MPPTCL can proceed against any of the parties who shall be jointly and severally liable for the performance and all other liabilities/obligations under the Contract to the MPPTCL.
- 4.** The financial liability of the Parties of this Deed of Undertaking to the MPPTCL, with respect to any of the claims arising out of the performance or non-performance of the obligations set forth in this Deed of Undertaking, read in conjunction with the relevant conditions of the Contract shall, however not be limited in any way so as to restrict or limit the liabilities or obligations of any of the Parties of this Deed of Undertaking.
- 5.** It is expressly understood and agreed between the Parties to this Undertaking that the responsibilities and obligations of each of the Parties shall be as delineated below:

SI No	Particulars	Quantity	Name of Member from Joint Venture
1	Supply of equipment/materials & software for TAMS System		
2	Services for Installation, Commissioning & Integration of TAMS Scheme with Transmission SCADA System of MP.		
3	Annual Maintenance Contract		

*(to be suitably appended by the Parties along with this Undertaking in its bid)*

It is further undertaken by the parties that the above sharing of responsibilities and obligations shall not in any way be a limitation of joint and several responsibilities of the Parties under the Contract.

6. It is also understood that this Undertaking is provided for the purposes of undertaking joint and several liabilities of the partners to the Joint Venture for submission of the bid and performance of the Contract and that this Undertaking shall not be deemed to give rise to any additional liabilities or obligations, in any manner or any law, on any of the Parties to this Undertaking or on the Joint Venture, other than the express provisions of the Contract.
7. **This Undertaking shall be construed and interpreted in accordance with the provisions of the Contract.**
8. **In case of an award of a Contract, we the parties to this Deed of Undertaking do hereby agree that we shall be jointly and severally responsible for furnishing a Contract performance security from a bank in favour of the MPPTCL in the currency/currencies of the Contract.**
9. It is further agreed that this Deed of Undertaking shall be irrevocable and shall form an integral part of the bid and shall continue to be enforceable till the MPPTCL discharges the same or upon the completion of the Contract in accordance with its provisions, whichever is earlier. It shall be effective from the date first mentioned above for all purposes and intents.

IN WITNESS WHEREOF, the Parties to this Deed of Undertaking have through their authorized representatives executed these presents and affixed Common Seals of their companies, on the day, month and year first mentioned above.

Common Seal of .....  
has been affixed in my/ our  
presence pursuant to Board of

For Lead Partner (Party No.-1)  
For and on behalf of M/s  
.....

Director's Resolution dated .....  
Name .....  
Designation .....  
Signature .....

(Signature of the authorized  
representative)

WITNESS :

I. ....

II. ....

Common Seal of .....  
has been affixed in my/ our  
presence pursuant to Board of  
Director's Resolution dated .....

For Party No.-2  
For and on behalf of  
M/s.....

Name .....  
Designation .....  
Signature .....

(Signature of the authorized  
representative)

WITNESS :

I. ....

II. ....

Common Seal of .....  
has been affixed in my/ our  
presence pursuant to Board of  
Director's Resolution dated .....

For Party No.-3  
For and on behalf of M/s.  
.....

Name .....  
Designation .....  
Signature .....

(Signature of the authorized  
representative)

WITNESS :

I. ....

II. ....

**Note :**

1. The non-judicial stamp papers of appropriate value shall be purchased in the name of Joint Venture and the date of purchase should not be later than six months of date of execution of the Undertaking.
2. The Undertaking shall be signed on all the pages by the authorized representatives of each of the partners and should invariably be witnessed.



**FORMAT: 2**

**FORMAT FOR POWER OF ATTORNEY FOR JOINT VENTURE**

*(To be executed on Non-Judicial Stamp Paper worth ` 500.00 & ` 1.00 revenue stamps)*

KNOW ALL MEN BY THESE PRESENTS THAT WE, the Partners whose details are given hereunder ..... have formed a Joint Venture under the laws of .....and having our Registered Office(s)/Head Office(s) at ..... (hereinafter called the 'Joint Venture' which expression shall unless repugnant to the context or meaning thereof, include its successors, administrators and assigns) acting through M/s ..... being the Partner in-charge do hereby constitute, nominate and appoint M/s..... a Company incorporated under the laws of ..... and having its Registered/Head Office at ..... as our duly constituted lawful Attorney (hereinafter called "Attorney" or "Authorized Representative" or "Partner In-charge") to exercise all or any of the powers for and on behalf of the Joint Venture in regard to Specification No **TR-47/2018** ..... the bids for which have been invited by Chief Engineer (Plg. & Design), Block No. 3, Shakti Bhawan, Rampur, Jabalpur of M. P. Power Transmission Co. Ltd. (MPPTCL) to undertake the following acts :

- i) To submit proposal and participate in the aforesaid Bid Specification of the MPPTCL on behalf of the "Joint Venture".
- ii) To negotiate with the MPPTCL the terms and conditions for award of the Contract pursuant to the aforesaid Bid and to sign the Contract with the MPPTCL for and on behalf of the "Joint Venture".
- iii) To do any other act or submit any document related to the above.
- iv) To receive, accept and execute the Contract for and on behalf of the "Joint Venture".

It is clearly understood that the Partner In-charge (Lead Partner) shall ensure performance of the Contract(s) and if one or more Partner fail to perform their respective portions of the Contract(s), the same shall be deemed to be a default by all the Partners.

It is expressly understood that this Power of Attorney shall remain valid binding and irrevocable till completion of the Maintenance Period in terms of the Contract.

The Joint Venture hereby agrees and undertakes to ratify and confirm all

the whatsoever the said Attorney/Authorized Representatives/Partner in-charge quotes in the bid, negotiates and signs the Contract with the MPPTCL and/or proposes to act on behalf of the Joint Venture by virtue of this Power of Attorney and the same shall bind the Joint Venture as if done by itself.

IN WITNESS THEREOF the Partners Constituting the Joint Venture as aforesaid have executed these presents on this..... day of ..... under the Common Seal(s) of their Companies.

For and on behalf of the Partners of Joint Venture

.....  
.....  
.....

The Common Seal of the above Partners of the Joint Venture:

The Common Seal has been affixed there unto in the presence of:

WITNESS

- 1. Signature.....  
Name .....  
Designation .....  
Occupation .....
  
- 2. Signature.....  
Name .....  
Designation .....  
Occupation .....

**Note:**

- 1. The non-judicial stamp papers of appropriate value shall be purchased in the name of Joint Venture and the date of purchase should not be later than six months of date of execution of the Agreement.
  
- 2. The Agreement shall be signed on all the pages by the authorized representatives of each of the partners and should invariably be witnessed.

**FORMAT: 3**

**FORMAT FOR CONTRACT AGREEMENT**

**(JV Participation)**

*(To be executed on Non-Judicial Stamp Paper worth ` 500.00 & ` 1.00 revenue stamps).*

This Agreement is made this \_\_\_\_ day of \_\_\_\_\_ between Shri \_\_\_\_\_ on behalf of the Joint Venture (JV) of M/s. \_\_\_\_\_ (Name of Lead Partner) \_\_\_\_\_ (The lead partner of the JV) and M/s. \_\_\_\_\_ (Name of Other Partner) \_\_\_\_\_ (The partner of the JV) [Use as applicable] (hereinafter called the Contractor which expression shall where the context so admits, be deemed to include his heirs, executors, administrators and representatives) of the one part, and the Madhya Pradesh Power Transmission Ltd., Jabalpur (hereinafter called the MPPTCL which expression shall, where the context so admits, be deemed to include its permitted assigns) of the other part.

WHEREAS in accordance with a notice dtd. \_\_\_\_ of Chief Engineer (Plg. & Design), Block No. 3, Shakti Bhawan of the MPPTCL, the Contractor submitted his offer dated \_\_\_\_\_ for \_\_\_\_\_ more particularly described, mentioned, enumerated or referred to in tender specification, Annexures, Appendix, Formats, Schedules form of bidding document covering letters, schedules of prices and further correspondence and is for purposes of identification, signed by Shri \_\_\_\_\_ on behalf of the Contractor and Chief Engineer (Plg. & Design) of the MPPTCL and all of which shall be deemed to form part of this agreement as though separately set out herein and are included in the expression `Contract' herein used, (hereinafter referred to as the said works);

AND WHEREAS the MPPTCL has accepted the bid of the Contractor vide Work Order No. \_\_\_\_\_ dtd. \_\_\_\_\_ for \_\_\_\_\_ for the sum of ` \_\_\_\_\_ (In words ` \_\_\_\_\_) upon the terms and subject to the condition hereinafter mentioned;

NOW THEREFORE THIS AGREEMENT WITNESSES AND IT IS hereby agreed as follows :

The \_\_\_\_\_ contractor \_\_\_\_\_ shall \_\_\_\_\_ do \_\_\_\_\_ and do, perform and carry out all matters incidental and/or ancillary thereto within the time specified in the and in accordance with the terms and conditions specified in the MPPTCL's Work Order No. \_\_\_\_\_ dtd. \_\_\_\_\_.

2. For the work done under the scope of the MPPTCL's Work Order referred above, the MPPTCL shall pay to the Contractor ` \_\_\_\_\_ (In words ` \_\_\_\_\_) or such other sum as may become payable in accordance with the said work

order.

3. In all matters arising under out of or in relation to this agreement, the terms and conditions contained in the aforesaid Work Order No. \_\_\_\_\_ dtd. \_\_\_\_\_ shall apply and all such matters shall be determined accordingly.

4. This agreement shall be deemed to be entered into at Jabalpur and all disputes and claims, if any, out of or in respect of this Agreement are to be settled at Jabalpur or be triable only in any competent court situated at Jabalpur.

IN WITNESS whereof the parties hereto have signed this agreement on the dates and year mentioned against their respective signature.

**Signature of Witnesses :**

**Name & Signature**

1. Signature : \_\_\_\_\_  
Name: \_\_\_\_\_  
Address: \_\_\_\_\_

Signature: \_\_\_\_\_  
**(On behalf of the Contractor)**  
Name: \_\_\_\_\_  
Designation:-  
Seal

2. Signature : \_\_\_\_\_  
Name: \_\_\_\_\_  
Address: \_\_\_\_\_

**Signature of Witnesses :**

1. Signature : \_\_\_\_\_  
Name: \_\_\_\_\_  
Address: \_\_\_\_\_

Signature: \_\_\_\_\_  
**(On behalf of the MPPTCL)**  
Name: \_\_\_\_\_  
Designation:-  
Seal

2. Signature : \_\_\_\_\_  
Name: \_\_\_\_\_  
Address: \_\_\_\_\_

**FORMAT: 4**

**AGREEMENT PROFORMA**

(To be executed on Non-Judicial Stamp Paper worth ` 500/- and ` 1/- revenue stamps).

This Agreement is made this \_\_\_\_day of \_\_\_\_\_ between Shri \_\_\_\_\_ on behalf of the Contractor M/s. \_\_\_\_\_ (hereinafter called the Contractor which expression shall where the context so admits, be deemed to include his heirs, executors, administrators and representatives) of the one part, and the Madhya Pradesh Power Transmission Ltd., Jabalpur (hereinafter called the MPPTCL which expression shall, where the context so admits, be deemed to include its permitted assigns) of the other part.

WHEREAS in accordance with a notice dtd ..... of Chief Engineer (Plg& Design), Block No. 3, Shakti Bhawan of the MPPTCL, the Contractor submitted his offer dated \_\_\_\_\_ for TAMS System with all equipment/materials & services for Installation, Commissioning & Integration and Annual Maintenance Contract more particularly described, mentioned, enumerated or referred to in the Tender Specifications, Annexure, Appendix, Schedules, form of bidding document covering letters, schedules of prices and further correspondence and is for purposes of identification, signed by Shri \_\_\_\_\_ on behalf of the Contractor and Chief Engineer (Plg. & Design) of the MPPTCL and all of which shall be deemed to form part of this agreement as though separately set out herein and are included in the expression 'Contract' herein used, (hereinafter referred to as the said works);

AND WHEREAS the MPPTCL has accepted the bid of the Contractor vide Work Order No. \_\_\_\_\_ dtd. \_\_\_\_\_ for \_\_\_\_\_ for the sum of ` \_\_\_\_\_ (In words ` \_\_\_\_\_) upon the terms and subject to the condition hereinafter mentioned;

NOW THEREFORE THIS AGREEMENT WITNESSES AND IT IS hereby agreed as follows:

The contractor shall do \_\_\_\_\_ and do, perform and carry out all matters incidental and/or ancillary thereto within the time specified in the, and in accordance with the terms and conditions specified in the MPPTCL's Work Order No. \_\_\_\_\_ dtd. \_\_\_\_\_.

2. For the work done under the scope of the MPPTCL's Work Order referred above, the MPPTCL shall pay to the Contractor ` \_\_\_\_\_ (In words ` \_\_\_\_\_) or such other sum as may become payable in accordance with the said work order.

3. In all matters arising under out of or in relation to this agreement, the terms and conditions contained in the aforesaid Work Order No. \_\_\_\_\_ dtd. \_\_\_\_\_ shall apply and all such matters shall be determined accordingly.

4. This agreement shall be deemed to be entered into at Jabalpur and all disputes and claims, if any, out of or in respect of this Agreement are to be settled at Jabalpur or be triable only in any competent court situated at Jabalpur.

IN WITNESS whereof the parties hereto have signed this agreement on the dates and year mentioned against their respective signature.

**Signature of Witnesses:**                      **Name & Signature for Contractor**

- |  |   |
|--|---|
| 1.    Signature: _____<br>Address: _____ | Signature<br>(On behalf of the Contractor)<br>Name: - |
| 2.    Signature: _____<br>Address: _____ | Designation<br>Seal.....                              |

**Signature of Witnesses:**

- |   |   |
|---|---|
| 1.    Signature: _____<br>Address: _____      | Signature<br>On behalf of the MPPTCL)<br>Name: -<br>Designation:- |
| 2.    Signature : _____<br><br>Address: _____ | Seal .....  |

--X--

**Marking Sheet- 1**  
**Marks against Bidder's Asset**

Marks for Bidder's Asset TotalMarks-45	Total Marks	Bidder 1	Bidder 2	Bidder 3
		Marks	Marks	Marks
<b>A. Instrument and Software</b>	<b>(35)</b>			
<b>a. DGPS (dual frequency, at least 50 channel and above</b>	<b>(17)</b>			
i) Minimum 12 nos. (own)+4(hire),	12			
ii) Minimum 16nos. (own)	17			
<b>b. Auto Level/ Digital Level (Minimum 4 nos.)(own)</b>	<b>3</b>			
<b>c. Computers (minimum 4 nos., own) Normal speed processing computer having i7 processor, 8 GB RAM, 4 GB Graphics Cards</b>	<b>5</b>			
<b>d. GNSS post processing Software for base line and network adjustment</b>	<b>5</b>			
i) (1no.own by the agency)	3			
ii)>(1no.own by the agency)	5			
<b>e. Software GIS system &amp; mapping software</b>	<b>5</b>			
i) (1no.own by the agency)	3			
ii)>(1no.own by the agency)	5			
<b>B. Manpower</b>	<b>(10)</b>			
i) Minimum employee on regular payroll should be <b>12</b> , among them at least <b>2 should be Graduate Engineer/Science Graduate</b> and at least 10 should be Diploma in Civil Engineering/ Surveyor/ITI + 4 can be hired Diploma in Civil Engineering/ Surveyor/ITI meeting the Bid Criteria	8			
ii)Additional <b>3</b> employees: 1 on pay roll+2 hire, Minimum Diploma Civil Engineering/ Surveyor/ ITI/ Science Graduate or any other engineering of <b>2- years experience</b> in Survey works	10			
<b>Total</b>	<b>45</b>			

**Marking Sheet- 2**  
**Marks against Bidder's Credential**

Marks for Bidder's Credential TotalMarks-45	Total Marks	Bidder 1	Bidder 2	Bidder 2
		Marks	Marks	Marks
<b>A. Company Registration</b>	<b>(3)</b>			
i) Minimum 03 years old from the date of submission of tender	2			
ii) More than 04 years old from the date of submission of tender. Additional marks	3			
<b>B. Minimum Average annual Turn-Over of the last three financial years</b>	<b>(10)</b>			
i) More than ₹12Cr (100% of the Requirement)	8			
ii) More than 125% of the Requirement	9			
iii) More than 150% of the Requirement	10			
<b>C. Liquid Assets:</b>	<b>(5)</b>			
i) More than ₹3.00 Cr (100% of the Requirement)	3			
ii) More than 125% of the Requirement	4			
iii) More than 150% of the Requirement	5			
<b>D. Work Experience:</b>	<b>(27)</b>			
<b>a. Similar work of DGPS Survey and implementation of Geographical Information System in last five previous financial year</b>	<b>(10)</b>			
<b>i) Single work more than ₹12 Cr and less than ₹ 14 Cr</b>	7			
<b>ii) Single work more than ₹ 14 Cr and less than ₹ 16 Cr</b>	8			
<b>iii) Single work more than ₹ 16 Cr</b>	10			
<b>b. Work performance of one year</b>	<b>(7)</b>			
<b>i) Single work more than ₹12 Cr and less than ₹ 14 Cr</b>	5			
<b>ii) Single work more than ₹14Cr</b>	7			
<b>c. Similar work of DGPS Survey and implementation of Geographical Information System in last five financial year executed by key personnel</b>	<b>(10)</b>			
<b>i. One Sr. Professional having experience of two similar projects</b>	<b>6</b>			
<b>ii. Two Professional each having experience of one similar projects</b>	<b>4</b>			
<b>Total</b>	<b>45</b>			



**Marking Sheet- 3**

**Marks against Bidder's Methodology, Work Plan, Organization & Staff Plan and Live demonstration of Applications for presenting operational speed, user-friendly, Limitations, etc.**

<b>Marks for Company Methodology Work Plan and live demonstration (Total Marks-10)</b>	<b>Total Marks</b>	<b>Bidder 1</b>	<b>Bidder 2</b>	<b>Bidder 3</b>
<b>A. Methodology</b>	<b>2</b>			
<b>B. Work Plan</b>	<b>3</b>			
<b>C. Organization and Staff plan</b>	<b>2</b>			
<b>D. Live demonstration of Applications for presenting operational speed, user-friendly, Limitations, etc.</b>	<b>3</b>			
<b>Total</b>	<b>10</b>			

**Marking Sheet- 4  
Summary of Bidder's Marks**

<b>Name of Bidder</b>	<b>Marks for Bidder's Asset (Total Marks 45)</b>	<b>Marks for Bidder's Credential (Total Marks 45)</b>	<b>Marks for Bidder's Company Methodology Work Plan and live demonstration (Total Marks 10)</b>	<b>Total (T<sub>b</sub>) (Sum of Marks obtained in Marking Sheet 1 to 3)</b>
	<b>(Marking Sheet-1)</b>	<b>(Marking Sheet 2)</b>	<b>(Marking Sheet 3)</b>	
<b>Bidder 1</b>				
<b>Bidder 2</b>				
<b>Bidder 2</b>				