**TERMS OF REFERENCE (TOR)**

**FOR**

**GIS CONSULTANT**

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**GIS CONSULTANT**

**"GEOGRAPHIC INFORMATION SYSTEM (GIS) ENTERPRISE"**

1. **BACKGROUND**

MEPCO is one of the biggest Distribution Companies of Electricity in the Public Sector, serving more than 7.39 million consumers having 15000+ employees with annual turnover of more than Rs.300 Billion.

MEPCO has completed GIS based mapping of 1700-No. 11kV feeders and 236 No. Transmission Lines / Circuits using desktop based application (Arc GIS) developed by ESRI and the same data is being used for Technical Loss Evaluation in SynerGEE Electric Software developed by DNVGL Nobel Denten.

MEPCO management intends to implement state of the art Enterprise GIS Solution in MEPCO for optimization of resources, decision making, area planning and real time updating of T&G & Distribution network upto consumer level, utilization of GIS data by all Directorates under MEPCO and integrating other Directorates (i.e. ERP, IT. MM. Construction, GSO, GSC etc..) with GIS Enterprise.

In order to get maximum benefit of available GIS data, over view of the existing system need assessment, proposed solution for the Enterprise GIS Solution in MEPCO services of the consultant having 10 years experience in successful implementation of Enterprise GIS Solution in Electrical utility is required.

1. **OBJECTIVE / PURPOSE OF THE ASSIGNMENT**

MEPCO is looking to standardized and streamline the process of GIS Survey, Mapping and analysis of MEPCO T&D Network, enabling itself to complete the Planning & Engineering activities at significant speed for this purpose MEPCO management intends to deploy and implement an ArcGIS Enterprise Solution, the complete system for all Geo spatial needs to make maps , analyze data, solve problems, share Geo spatial data and integrating application / data bases presently being used by different Directorates (i.e ERP, IT, MM, Construction, Operation, GSO, GSC etc..) in MEPCO with proposed GIS Enterprise Solution. Development of Dashboard as per requirement of MEPCO. The broad-level requirement as per MEPCO Scope of work is as follows but not limited to:

1. **SCOPE OF SERVICES / DELIVERABLE**

The scope of advisory services required are divided in following Four Phases:

**EVALUATION PHASE:-**

* Review operating procedures of all departments of MEPCO.
* Evaluate the level of expertise of resources with respect to GIS.
* Evaluate the existing organization structure of IT, GIS and operations.
* Evaluate the IT landscape along with software and hard ware utilized in different departments.
* Assist in formulation of the team for Enterprise GIS project implementation.

**DESIGN PHASE:-**

* Conduct the objective setting exercise to priorities project objectives.
* Propose the requirements of current and future GIS software applications best suited for MEPCO
* Propose selection criteria for induction of GIS qualified personnel
* Propose methodology for enabling a sustainable GIS Department
* Propose high-level solution and chart out GIS roadmap for MEPCO.
* Devise phase-wise Scope of work for the Implementation of Enterprise GIS.
* Proposed organization structure for GIS best suited in the context of MEPCO.
* Propose regular training requirements identifying reliable sources for imparting such training.
* Advise / propose utilization/interface of GIS towards digitization of MEPCO ( ie Distribution Management System, Outage Management System etc).

**FINALIZATION OF TECHNICAL PROPOSAL / CONTRACT:-**

* Formulating the technical contract with consultation of MEPCO Team as per requirement of MEPCO for project initiation.
* Engage in reviewing the technical proposal and finalize technical evaluation as per prescribed MEPCO process.
* Established design authority team to govern the project architecture.

**EXECUTION PHASE (Optional):**

* Act as Quality advisor for the project and provide assistance to MEPCO.
* Provide guideline in setting up governing structures and SOPs for successfully running GIS operations.
* Any other assignment in GIS Field in addition to above

1. **PROFILE OF CONSULTANT**

The Consultant will be assigned from the list of shortlisted consultants fulfilling the minimum 10 years of working Experience in an organization of similar size and significant importance in GIS, in public or private sector and shall have successfully completed more than one enterprise GIS projects implemented locally or internationally in electric utility / public or private sector. Must have knowledge and experience of development, using tools like ArcGIS, ArcSDE, ArcFM / Utility Network Module and spatial Data bases. Past Experience of integration of different application / data bases (SAP-ERP, IBS and CCMS) will be an additive advantage. The consultant should have experience of working with Power Industry for Transmission & Distribution business which includes using GIS as the main tool for assets and maintenance and knowledge of associated hardware sizing and associated accessories.

1. **EXPECTED DELIVERABLES**

A monthly progress report on consultants work would be prepared and submitted, including tasks listed under" Scope of Services/ Deliverable", above.

1. **TIME PERIOD**

The Consultant will be engaged for a period of 09-Months or till completion of project which so ever is earlier. However, further period may be extendable if required by MEPCO Management.

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| **Stage** | **Description** | **Time Line** |
| 1  Evaluation Phase | * Review operating procedures of all departments of MEPCO. * Evaluate the level of expertise of resources with respect to GIS. * Evaluate the existing organization structure of IT, GIS and operations. * Evaluate the IT landscape along with software and hardware utilized in different departments. * Assist in formulation of the team for Enterprise GIS project implementation. | 2-Months |
| 2  Design Phase | * Conduct the objective setting exercise to priorities project objectives. * Propose the requirements of current and future GIS software applications best suited for MEPCO * Propose selection criteria for induction of GIS qualified personnel * Propose methodology for enabling a sustainable GIS Department * Propose high-level solution and chart out GIS roadmap for MEPCO. * Devise phase-wise Scope of work for the Implementation of Enterprise GIS. * Proposed organization structure for GIS best suited in the context of MEPCO. * Propose regular training requirements identifying reliable sources for imparting such training. * Advise / propose utilization/interface of GIS towards digitization of MEPCO ( ie Distribution Management System, Outage Management System etc). | 3-Months |
| 3  Finalization of Technical Proposal/ Contract | * Formulating the technical contract with consultation of MEPCO Team as per requirement of MEPCO for project initiation. * Engage in reviewing the technical proposal and finalize technical evaluation as per prescribed MEPCO process. * Established design authority team to govern the project architecture. | 1-Month |
| 4  Execution Phase (Optional) | * Act as Quality advisor for the project and will assist MEPCO Management in this regard. * Provide guideline in setting up governing structures and SOPs for successfully running GIS operations. | * Consultancy services agreement may be extended for specific purpose if required and approved by MEPCO Management. * Duration of execution phase is dependent upon the scope of services required by MEPCO in the light of recommendation report submitted by the consultant. |

1. **PAYMENT TO THE CONSULTANT**

The payment to the consultants based on the services/ deliverables will be made on a monthly/quarterly basis upon mutual consensus by consultant & MEPCO.

* 1. **Qualification of Key Personnel**

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| **Sr. No.** | **Name of Individual Consultancy** | **Qualifications** | **Age Limit** | **Experience** |
| 01 | Geographic Information System (GIS) Expert | Minimum of sixteen years of education and Master Degree in GIS or relevant from a local or international HEC recognized university. | 65 Years in case of Individual Consultant | * 10 years of working Experience of GIS in designing similar projects in organizations of public utility/ private sector. * The consultant shall have successfully completed more than one enterprise GIS projects implemented locally or internationally in electric utility / public or private sector. * Must have knowledge and experience of development, using tools like ArcGIS, ArcSDE, ArcFM / Utility Network Module and spatial Data bases. * Past Experience of integration of different application / data bases will be an added advantage. * Should have experience of working with Power Industry for Transmission & Distribution business which includes using GIS as the main tool for assets and maintenance. * Should have knowledge of associated hardware sizing and associated accessories. * Experience of project consultancy and implementation. |

**7.2** **Project Management, Quality Control and Safety.**

1. Check and make recommendations on quality assurance, quality control plan and submitted by consultant.
2. In the event of the Project milestones/timelines not achieved, the consultant shall undertake a review of the progress of deliverables and identify potential delays, if any. If the consultant shall determine that completion of the work/ task is not feasible within the time specified in the contract agreement, it shall require Consultant to indicate within 15 (fifteen) days the steps proposed to be taken to expedite progress, and the period within which the work/ Task Completion Date shall be achieved. The consultant shall review the same and send its comments to the MEPCO.
3. If DELAY is not attributable to the Consultant, the Consultant shall propose the extension of dates set forth in the Task Completion Schedule, to which the Consultant is reasonably.
4. The progress regarding delivery will be monitored as per detailed scope and provide feedback to MEPCO on weekly and monthly basis.

**7.3** **Verification of consultant's Invoices**

The progress payments due to the consultant in accordance with the provisions of the respective contract document will be verified by concerned department.

**7.4** **Preparation of Reports and Documents**

1. The Consultant shall Prepare detailed implementation plan with monthly reviews, comments and updates. Implementation plan report should indicate the activity-wise phasing of Task. Identify the critical factors that could affect the implementation of the Tasks and develop a detailed management plan and recouping strategies for such factors.
2. Consultant shall submit a Monthly Progress Report that summarizes all aspects of the completed month and cumulative work progress.
3. Upon completion of the Task/ Deliverables, the Consultant will prepare the Completion Report.

All reports/documents should be in English language and content/format of the same should be finalized with concurrence of MEPCO. For each report submitted an electronic copy will also be provided.

1. **COMPLETION PERIOD**

All the works are required to be completed within Six **(06) months**. Reports need to be approved by Competent Authority of MEPCO.

1. **ELIGIBILITY/ QUALIFICATION CRITERIA FOR CONSULTANT**
   1. Applicant Consultant must have minimum of 10 years of working Experience of GIS in designing similar projects in organizations of public utility/ private sector.. However, experience of key personnel will be as mentioned in individual Term of Reference.
   2. Only those consultants will be eligible to submit their proposals who are active taxpayers as per Federal Board of Revenue Data base i.e. Active Taxpayer List (ATL) for both Income Tax & Sales Tax and relevant provincial revenue authorities/boards as the case may.
   3. Consultant shall have sound financial background proportional to the magnitude of work involved. Duly supported by reports, on financial standing of consultant such as balance sheets inter alia, assets and liabilities certified by an auditor along with auditor’s report for last three years.
   4. Consultant may engage/contract key personnel specifically for the above said assignments. However, consent of such key personnel for working on the assignment has to be attached with the proposal.
   5. In case of JV, Team Leader must be from the lead Consultant.

**9.1** **Documents Establishing Qualification of Consultant**

To prove his qualification for award of Contract, Consultant/ JV shall provide the following information along with documentary evidence in detail:

* + 1. The background and experience of Consultant (individual or joint venture) including authenticated list of current agreements and other supporting documents of past and present works of a nature similar to this project in the last ten years.
    2. The detailed approach and methodology along with activity-wise time schedule proposed for carrying out the work as mentioned under the scope of work including other detailed information as deemed relevant.
    3. The name, qualifications and professional experience of key personnel to be assigned to the project. Such key personnel shall be employed with the consultant. Documentary evidence to this effect including authentic salary slips of the key personnel shall be submitted with the proposal. Salary slips should be genuine and signed by the authorized representative of Consultant as well as concerned key person.

1. **HOUSING & OFFICE FACILITIES FOR THE CONSULTANT**
   1. The Consultant shall establish their project office near the Client's office.
   2. The Consultant shall make their own arrangements to furnish their offices. They shall provide cost estimates and details of their requirement in this respect under Direct Cost in their proposal.
2. **TRANSPORT**

Vehicles required by Consultant, their operation and maintenance shall be covered in the direct cost of the Consultant.

1. **TAXES AND DUTIES**

The payment of Taxes, Duties, Fees and other impositions as may be levied under the applicable law, in respect of the Consultant and their personnel shall not be the responsibility of Client.