

Indian Institute of Tropical Meteorology, Pune – 411 008
(An autonomous Institute under Ministry of Earth Sciences, Government. of India)
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www.tropmet.res.in

Appointment of Consultant in Electrical Engineering

The Indian Institute of Tropical Meteorology, Pune is an Autonomous Institute under the Ministry of Earth Sciences, Govt. of India, New Delhi. It is proposed to install an Electrical system required for functioning of a powerful High performance computer system at this Institute. For accomplishing the above project it is proposed to appoint **one Consultant in Electrical Engineering** having sound knowledge of electrical as well as of Electronic background, on contract basis till the tenure of the project. Details of the nature of job can be had from Administrative Officer or visit the Institute's website www.tropmet.res.in. Renowned Engineer/consultant in the above field with good experience may attend a walk in interview on **15th March 2007, sharp at 1000 hrs** with their CV containing full details of qualification and experience in the field in Government /Commercial set up and reference letter from the earlier employer.

Job Specifications for Consultant in Electrical Engineering

It is proposed to install a High Performance Computing System at the Institute. The Electrical System consisting of the (MSEB) Electrical Substation with a high capacity Transformer, a Diesel Generator (D.G.) System, a UPS system, a Precision Centralized Air-conditioning System and ancillary electrical components required for functioning of a powerful High Performance Computer (HPC) system, workstations etc., is to be installed at the Institute. This project involves work of extensive planning and designing as follows:

A) Project Planning (Electrical System)

- Preliminary Interactions with promoters of the project for understanding a basic outline and informing them about key input data required for Electrical System
- Developing Load Data sheets
- Deciding the requirements for Transformer, D.G. System and UPS
- Electrical requirements for Centralized (precision) Air-conditioning Plant
- Outlining the requirements of LAN System for connecting the HPC and the newly acquired workstations with the exiting LAN.
- Deciding "Spare Capacities" and "Standby Requirements" along with step by step attainment of the load to its full capacity
- Discussing the requirement of providing redundancy for the electrical system
- Deciding upon Essential, Non-Essential and Emergency Requirements

- Limitations due to MSEB, IE Rules and other Govt. Requirements
- Development of Preliminary Single Line Diagram and Interactions for Implementing the same
- Preliminary Master Layout for Incoming Supply Arrangement (MSEB Substation to be installed at the campus and evaluating the technical specifications of the Transformer to be acquired)
- Finalising Load Data Sheets

B) Designing and Detailed Engineering

- Designing Electrical System and deciding key parameters
- Equipment Selection Criteria
- Protection Scheme Criteria
- Development of Detailed Single Line Diagrams
- Layout and Sections for Substation
- Design and Detailing Outdoor Electrical System
- Layout and Sections for Electrical Control Room
- Design & Detailing of Indoor Electrical System including PCCs,PDBs, MCCs Etc
- Room wise Layouts for lighting Fans and Plug/Sockets with equipments
- Power Distribution Schemes with Layout
- Submission of drawing/documents for Electrical Works to Govt. Authorities and obtaining approval of the same
- Detailed Specifications for Equipment, Material and Installation
- Preparing detailed Bill of Material (BOM) for Electrical Work on the basis of approved Design and Drawings
- Preparing Tender Document for Appointing Electrical Contractor/s for supplying and installing Transformer, D.G. System, UPS, A/C system etc.
- Inviting Tender offers with necessary terms and conditions
- Techno-commercial evaluations of the offers
- Assistance in Negotiations and Selection of the Contractor/s
- Advising on various statutory requirements / Assistance in Obtaining approvals from Govt. authorities

- Ensuring compliance with the various technical requirements prior to the commencement of work at site
- Site preparation for installing the Electrical System.
- Getting familiarized with operating procedures and training Institute's personnel.

C) Periodic Site Work

- Periodic coordination meeting and interaction
- Periodic Inspection of Installation activities at site and ensuring that the same is carried out only as per approved drawings and specifications
- Checking / approving contractors Running Account Payment
- Random Checking for ensuring quality control
- Identification & corrective actions on the matters causing the delays and work scheduling
- Preparing of "as built" drawings
- Problem solving & advising at site on Technical matters
- Testing / Commissioning procedure and upkeep of the records
- Assistance and Guidance for System commissioning and taking over.

With the mutual consent of both the parties, Institute may continue to avail itself of the consultancy and supervisory services for a period of one year after successful installation of the Electrical System.

In order to avoid breakdowns/failures, redundancy will be an in-built feature of the Electrical system, wherever possible.

The design and layout of the Electrical system will be such that it will provide for upgradation (wherever possible) at a later date, if the situation so demands.

Administrative Officer
for Director