

Owner's Engineer Assistance

▪ Tender documents:

Preparing general and detailed specifications of the scope of work that the contractor must fulfil. Including design and construction, operation and maintenance, performance, tests and standards, permits, payments milestones.

- Technical evaluation and analysis of the proposed project, system study reports, technology application, capacity, telecommunication requirements, operation and maintenance and overall project schedule.
- Evaluating the project pre-requisites including approvals/permits/consents, Right of Way (ROW), laws and regulations, and EIA study
- Preliminary site/route investigation
- Cost estimates and technical data (including O&M costs) for financial modelling
- Identifying and analysing project risks and mitigation measures
- Reviewing all project requirements and issues
- Preparing ITB/Tender Documents for the project based on the system study, reliable technology and best engineering practice
- Functional specification, clear and precise criteria related to:
 - Design and construction,
 - Operation and maintenance
 - Performance (e.g. transmission capacity, reliability, Losses, audible noise, filtering, reactive power performance, AC voltage performance, insulation co-ordination, protection coordination)
- Tests and standards
- Consideration taken to approvals, permits, consents, right of way, national and laws and regulations.
- Contract conditions
- Payment milestones

▪ Tender evaluation:

Evaluating proposals from all aspects including technical, environmental, economical and financial.

- Evaluation of EPC proposals (from all aspects including technical, environmental, economical and financial) and preparation of report on recommendation
- Technical, financial and management advice and assistance in negotiation with potential EPC contractors

- Preparation of EPC contract and other project related documentations
 - Review of key project agreements such as EPC contracts and other project undertakings to bring the system to commercial operation
 - Preparation of required technical documentations for financial close and loan draw downs
 - Preparation and submittal of EPC evaluation reports
 - Pre-bid meeting
 - Tender Clarifications
 - Tender Opening
 - Evaluation:
 - Preliminary examination,
 - Comparison
 - Economical and commercial evaluation
 - Technical evaluation
 - Clarifications and clarification meetings for equalization
 - Recommendation
 - Evaluation report
 - Contract Negotiations
- **Contract preparation:** Negotiating and preparing the contract. Preparing technical documentation for financial close and loan draw downs.
 - **Design review:** Reviewing the general and detailed engineering design, to ensure that the best technical solutions are used and that they fulfil the requirements of the specifications and construction.
 - **Witnessing of tests:** Witnessing and documenting factory acceptance tests (FAT) and site acceptance tests (SAT).
 - **Project management and supervision of construction:** Managing the project implementation including project documents, budget and cash flow, and supervising the site activities to ensure that the construction is being done following the plan, design and time schedule.
 - Follow up Contractors costs / Invoices
 - Review Contractors Design drawings and line routes
 - Review Contractors type drawings and specifications
 - Review Contractors construction planning and time schedules

- Check delivered material and equipment and contractors store management
 - Check Contractors work progress
 - Supervise during construction, check that all specified material is correctly installed and all work made in a professional manner
 - Arrange and head weekly Site Meetings in order to assure contractors plans, progress and quality of work.
 - Attend factory acceptance tests of key material
 - Attend type tests of selected material
 - Issue variation orders
 - Arrange and head Project Meetings on periodic intervals (monthly)
 - Prepare Monthly Progress Reports
 - Prepare Quarterly Progress Reports
 - Assist and advise the client in various matters
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 - Assistance during guarantee period
 - Final Inspection
 - Prepare a Final Report / Project Completion Report
- Witnessing of commissioning: Supervision of the start-up tests of the different parts and of the project.