**SINDH SOLAR ENERGY PROJECT**
**ENERGY DEPARTMENT, GOVERNMENT OF SINDH**

# Terms of References

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|---|---|
| **Name of country:** | **Islamic Republic of Pakistan** |
| **Project:** | **Sindh Solar Energy Project** |
| **Title of Assignment:** | **Supervision of Procurement and Civil Works Pertaining to Construction of Boundary Wall, Gates and Watch Tower at Proposed Sites for Solar Plants Under SSEP Project.** |

## 1. Project Background

Sindh Energy Department (SED) under Government of Sindh (GoS) has obtained financing and technical support from the World Bank to expand solar power and increase access to electricity under the Sindh SolarEnergy Project (SSEP). This assignment of SSEP targets the Procurement of Consultancy Services for Supervision of Civil Works pertaining to construction of Boundary Wall, Gates, and Watch Tower at proposed sites for Solar Plants.

The services include, but not limited to the followings:

i) Preparation of Bidding Documents of 4 Lots.
ii) Assist the Project Management Unit of SSEP (the "Client")) in the bidding process of boundary wall.
iii) Resident Supervision of the Works.

The services of the engineering firm (the "Consultant") are required to support the Client in the implementation of Procurement and Supervision for the Civil Works.

## 2. Objective of the Assignment

The objective of this assignment is to ensure that the Procurement and Supervision of the Civil Works is carried out in accordance with the highest standards, and conforming to technical specification andcontractual requirements, in a timely manner.

The following requirements shall apply to this assignment:

i) The Consultant shall assist the Client and shall act under its directions.
ii) The Consultant shall work closely with the Client to support them on design verification and supervision activities and adhere to communication frequency and reporting.
iii) The consultant shall engage actively and coordinate with suppliers, facility management and otherstakeholders to ensure a that the implementation is facilitated in the most optimal forms.
iv) The Consultant shall undertake their work with professionalism and integrity, representing the interests of the Client in ensuring value for money.
v) The Consultant shall prepare cost estimates based on the specifications, bill of quantities (BoQs), and bidding documents.
vi) The Consultant shall provide support in bid evaluation and award of contract and conduct subsequent construction supervision.

## 3. Scope of Consulting Services

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**Activity 1. Supervision of Procurement:** The consultant will support the Client for procurement activities including preparation of bidding documents (for four lots), conduct bidding and bid evaluation, contract award of 4 Lots. These shall comply with the relevant provisions of the project's Legal Agreements. The Consultant will also assist the Client with regard to contractual issues during implementation. Specifically, the activities shall include (but not limited to):

i. Validation of integration of safeguards documents with already developed bidding documents to ensure that ESMPs, Occupational Health and Safety (OHS) measures and other mitigation measures have the necessary specifications, cost estimates, BOQ items, etc. as relevant;

ii. Prepare the bidding documents and assist Client in issuing bid invitation, addendum/corrigendum, and clarifications to the bidders' queries, receiving of bids and evaluation, award of contract and signing of contract.

**Activity 2. Supervision of Civil Works:** The scope of services for construction supervision of planned works for Construction of Boundary Wall, Gates, and Watch Tower shall include support the Client in regular on-site supervision of construction works to ensure quality control and compliance with all aspects of the project designs and specifications.

It shall include (but not limited to):

- Undertaking required (necessary) surveys & investigations in consultation with the Client or need for any additional structures not designed during detailed engineering design stage.
- Prepare the project Quality Assurance and Quality Control (QA&QC) Manual, a consistent, comprehensive, and uniform QA &QC system for each lot, including but not limited to systems of checks and reviews, description of type, frequency, and procedures of onsite as well as laboratory tests and inspections, etc., that will be enforced during construction to ensure specific standards of quality. This should include activity/event wise specific roles and responsibilities of Construction Supervision Consultant and Contractor and receive approval of the Client for adoption. On approval, establish the system (including QAQC) and make it available to Contractor;
- Monitoring and enforcing, as detailed out in the Contract QA & QC Manuals, the quality of inputs, processes, and outputs during all activities of construction to ensure the highest quality of works conforming to the specifications and drawings;
- Scrutinize the contractor's detailed work program and guide the Contractor in preparation of work plan for each lot;
- Interpretation of the technical specifications for each contract package; Supervise and monitor construction works of each contract packages;
- Issue 'Good for Construction' drawings including required revisions and detailed drawings required during execution of the contract,
- Scrutinize construction methods proposed by the contractor including adequacy of the contractor's input materials, labor, equipment, environmental, safety, personnel, and community issues.
- Verification of source of materials and certification;
- Undertake required quality control activities and certify that the quality of materials and works conforms to the specifications and drawings;
- Prepare photo-documentation of various stages/items of work and make/ assist in presentations as well in MIS preparations as necessary;
- Record the work measurements, certify the contractor's bills, and assist the Client in interim and final certification of the bills of payment.
- Facilitate specific third-party inspections, as decided by the Client.

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- Review and finalize the "as built" drawings submitted by Contractor;
- Inspect the works at appropriate intervals during defect liability period;
- Assist the Client in issuing completion certificates;
- Prepare / update Occupational Health and Safety (OHS) Manual and supervise its compliance / adherence during execution by contractors to ensure safety of construction workers, engineers / supervisors and public and avoid disruptions.

**Activity 3. Defect Liability Period:** After the commencement of Civil Works for the duration of 06 Months, the defect **liability** period of 06 months shall be given by the Consultants.

## 4. Implementation of the Assignment:

The Implementation Period of this assignment is 13 Months. The procurement supervision shall be 01 month. Construction Supervision will be of total 12 months, out of which 06 months are for Supervision of Works and 06 months for Defects Liability Period.

| **Implementation Schedule** | |
|---|---|
| Activity 1. Supervision of Procurement | 01 Month |
| Activity 2. Supervision of Works | 06 Months |
| Activity 3. Defect Liability Period | 06 Months |
| **Total** | **13 Months** |

## 5. Qualifications of Firm:

(i) The firm shall be registered for past yen (10) years providing similar services; (ii) They should have successfully completed at least three (3) assignments of similar scale and complexity; iii) the management and logistical capacity of firm including general availability of qualified staff; and (iv) availability of staff required under scope of work stated here (CVs not required at this stage) which is as follows:

## 6. Team Composition

Following Team will be required at Procurement + Supervision Stage

| S. No | Expert | Status | No. | Months |
|---|---|---|---|---|
| 1 | Team Leader (The Engineer / Contracts Specialist) - CT | ***Key*** | 01 | 07 |
| 2 | Resident Engineer – CT | ***Key*** | 01 | 06 |
| 3 | Assistant Resident Engineers – ST | ***Key*** | 02 | 12 |
| 4 | Site Engineers – ST | Non-Key | 04 | 24 |
| 5 | Surveyors – CT | Non-Key | 02 | 12 |
| 6 | Material Engineers – ST | Non-Key | 04 | 24 |
| 7 | Quantity Surveyor – CT | Non-Key | 01 | 06 |
| 8 | Document Controller – CT | Non-Key | 01 | 06 |
| | | | **Total** | **97** |

- CT = Core Team
- ST = Site Team

Following Team will be required at DLP Stage

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| S. No | Expert | No. | Person Months |
|---|---|---|---|
| 1 | Team Leader (The Engineer / Contracts Specialist) | 01 | 06 |
| 2 | Resident Engineer | 01 | 03 |
| 3 | Quantity Surveyor | 01 | 03 |
| 4. | Document Controller | 01 | 06 |
| | | **Total** | **12** |

**KEY EXPERTS' QUALIFICATION:**

Key Experts as identified above shall be evaluated in the evaluation of the proposal. The requirements and basic qualification of the key experts are elucidated below:

***Team Leader (The Engineer / Contracts Specialist):*** The most critical expert on the project, the candidate must be a Master's in Civil Engineering from a renowned international university preferably from a reputed institute with at least 15 years of general experience in procurement, project management and contract administration of large-scale integrated infrastructure projects. The candidate must have at least 05 years of specific experience handling FIDIC contracts as The Engineer, must be familiar with FIDIC conditions of contract, Dispute Board proceedings and Adjudication etc. The candidate must be a registered Professional Engineer (PE) with the relevant authority and must hold a valid accreditation with a professional body of Project Management. Candidates with international as well as local experience in Pakistan (or other developing countries) shall be preferred.

***Resident Engineer***: The candidate must have a bachelor's in civil engineering with at least 15 years of general experience in supervising construction projects especially integrated infrastructure projects. Experience as Resident Engineer on at least 02 projects is mandatory.

***Assistant Resident Engineer***: The candidate must have a Bachelor's in Civil Engineering with at least 7 years of general experience in supervising construction projects especially integrated infrastructure projects. Experience as Assistant Resident Engineer on at least 01 project is mandatory.

**PROJECT DELIVERABLES:**

All reports documents prepared by the Consultants shall be professionally precise and objective and conforming to local and national law and rules of the specific industry. The report formats shall be finalized in consultation with the Employer. The consultants shall provide specified number of copies / sets of the following reports and / or documents to Employer, which may be varied as per requirements:

**(a) PROCUREMENT PHASE**

i. Tender Documents (Condition of Contracts package.
Specifications, Tender Drawings and Bill of Quantities) … 3 copies of each contract
ii. Engineer's Estimates…… 2 copies

*Note: The electronic versions of all documents will be provided to Employer along with the hardcopies.*

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**(b) CONSTRUCTION SUPERVISION PHASE**

i. Monthly Progress Report …… 2 copies

**(c) POST- CONSTRUCTION PHASE**

i. Project Completion Report (upon completion of DL period with consultants) and as built drawings …… 2 copies

**7. Selection Method**

A Consultant shall be selected in accordance with the Consultants Qualification based Selection (CQS) method set out in World Bank Procurement Regulations for IPF Borrowers", dated July 2016, revised November 2017.

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