TERMS OF REFERENCE

PROJECT MANAGER ELECTRO MECHANICAL

KARACHI WATER & SEWERAGE SERVICES IMPROVEMENT PROJECT

1 Introduction

Karachi is Pakistan's largest city, main seaport and international trade hub. It encounters numerous challenges among which water supply and sewerage are the worst affected services, falling far short of the city's expanding needs. To mitigate this gap, develop these services for Karachi and strengthen the Karachi Water and Sewerage Corporation (KWSC) to become a financially viable and technically well performing water utility that ensures clean, safe drinking water and sewerage services to public, the Government of Sindh GoS / KWSC partnered with the World Bank Group through the Karachi Water and Sewerage Services Improvement Project (KWSSIP). The Karachi Water and Sewerage Services Improvement Project (KWSSIP) encompass a USD 1.6 billion reform-led investment program, to be implemented in four phases over a period of 12 years. Phase 1, with an investment portfolio of USD 100 million, was completed on 30 June 2026. Building on its achievements, the Project Implementation Unit (PIU) continues to support the implementation of KWSSIP-II. The Project Proposal Form (PC-1) for the Second Phase of KWSSIP amounting to US$600 Million has been approved by the Executive Committee of the National Economic Council (ECNEC). The project has been approved by the World Bank Board on 12th December 2024. The project is being implemented by the Government of Sindh (GoS) and the Karachi Water and Sewerage Corporation (KWSC) through multiple procurement processes, expected to occur within a short timeframe. The project activities aim to achieve key milestones, including addressing environmental aspects associated with the proposed project components.

1.1 Project Components

KWSSIP-2 has been developed for institutional and governance reforms in KWSC along with strategic investments for the improvement of water and sewerage infrastructure and services in Karachi.

The following are the project components:

Component 1 – Operational & Enabling Environment Reform

- **a.** Institutional Reforms and Capacity Building in Human Resource (HR)
- **b.** Implementation of Communication Program & Capacity Development of Customer Relations Management (CRM)
- **c.** Implementation of Gender Action Plan (GAP)
- **d.** Capacity Building in Asset Management, GIS and Data Collection Strategy
- **e.** Preparation and Implementation of Water Safety Plans
- **f.** Outsourcing of Metering & Operation and Maintenance (O&M)

g. Advance Studies for the adaptation of Trenchless technology of Infrastructure development in Karachi Water and Sewerage Program
h. Financial Management improvement

Component 2 – Infrastructure Investments

a. Rehabilitating Water Supply and Sewerage in Selected Low-Income Communities
b. Priority Sewer Network Rehabilitation and Extension
c. Priority Water Network Rehabilitation including O&M equipment, meters & District Metered Areas (DMAs) to reduce Non-Revenue Water (NRW)
d. Priority Works for Reducing Energy Consumption
e. K-IV Augmentation and Downstream Allied Works
f. Rehabilitation of Existing Filtration Plants (NEK K-II, 100 MGD, Pipri JBIC 50 MGD)
g. Viability Gap Funding (VGF) to support Public Private Partnership (PPP) Interventions

Component 3 – Project Management and Studies

a. Design Review and Construction Supervision of the Proposed Sub-Projects of Phase-2
b. Follow-up studies on energy audits
c. Preparation of KWSSIP -3, feasibility, E&S study, designing & PC-1, follow up study from the Master Plan Study

2 Duties, roles and responsibilities of the Project Manager

The objective of this assignment is to employ a professional Project Manager to lead contract management, provide technical governance, and manage the execution of design and construction phases. The Project Manager will ensure that the DR&CSC and Contractors fulfill their respective contractual obligations efficiently, keeping the sub-projects within the approved timeline, financial budget, technical specifications, and World Bank Environmental and Social Framework (ESF) standards.

The project manager shall be dealing with project d & f under component 2 of KWSSIP.

The Project Manager will deal with a complex portfolio of large-scale infrastructure projects, including rehabilitation & re-construction of Water Treatment Plants, Wastewater Treatment Plants in Karachi up to the capacity of 180 MGD along with implementation of energy efficiency interventions under KW&SC. Furthermore, the position involves managing safeguard-heavy operations that demand strict compliance with international environmental, health, and safety (EHS) standards, involuntary resettlement frameworks, and gender-inclusive community engagement protocols.

The Project Manager will actively manage the assignment across its **four (4) core phases for client side oversight, coordination, progress monitoring, risk analysis, any other**:

2.1 Phase 1: Design Review, Detailed Design & E&S Safeguards

i. Serves as the main link/focal point between the PIU/client and the consultants, contractors and other key stakeholders for the works.
ii. Manages and coordinates all activities related to the projects.
iii. Track the Design review & Construction Supervision Consultant's (DR&CSC) comprehensive design review of previous engineering simulation models, designs, and estimates for the water treatment plants and energy efficiency.
iv. Provide technical oversight to the DR&CSC in reviewing and updating concept design, detailed engineering designs for water filtration plants, chlorination stations, , secondary pumping stations and energy efficiency upgrades at the Dhabeji Pumping Complex.
v. Provide client side support wherever applicable & required.
vi. Oversee the revision and finalization of site-specific Environmental and Social Impact Assessments (ESIA), Environmental and Social Management Plans (ESMP), and Resettlement Action Plans (RAP) to comply with SEPA and World Bank standards.

2.2 Phase 2: Assistance in the Tendering & Procurement Phase

i. Ensure the procurement steps strictly follow World Bank Procurement Regulations and standard bidding frameworks.
ii. Provide leadership, guidance and support in the preparation of procurement documents to hire service providers, including Terms of References (ToRs), Expressions of Interest (EoIs), Requests for Proposals (RFPs), Requests for Quotations (RFQs), Requests for Bids (RFBs), specifications and other procurement documents for all types of procurements.
iii. Supervise market outreach, clear the issuance of Specific Procurement Notices (SPN), and evaluate clarifications/addenda compiled by the DR&CSC during the bidding window.
iv. Review technical and financial Bid Evaluation Reports (BERs) prepared by the DR&CSC, helping the Client finalize draft works contracts and lead contract negotiations.

2.3 Phase 3: Construction Supervision & Day-to-Day Contract Administration

i. Fulfill the operational duties of the Client's representative under applicable FIDIC conditions of contract.
ii. Prepares regular progress reports, work schedules, and implementation plans.
iii. Prepare budgets and cash flow projections in coordination with the Finance Team.
iv. Works with KW&SC focal points to ensure sustainable operation and maintenance plans are in place for KWSSIP-2 financed assets.
v. Assists in identification and appointment of adjudicators/Dispute Adjudication Boards (DAB) in consultation with the PIU procurement team.

vi. Provide guidance & support in preparation of the master construction schedule generated in MS Project/Primavera, validating that critical paths.
vii. Monitor the DR&CSC's factory acceptance testing (FAT) for all equipment and routine field testing logs, rejecting non-conforming works.
viii. Review & approve the verified joint measurements, Interim Payment Certificates (IPCs), and continuous cash flow projections.
ix. Proactively identify project risks, analyze variation orders (VOs) or No-Cost Extensions (NCEs) and mitigate potential contractor claims.
x. Ensure strict field adoption of the Contractor's ESMP (C-ESMP), Labor Management Procedures (LMP), and Gender Action Plans (GAP). Confirm that the Workers' Grievance Redress Mechanism (GRM) and specialized SEA/SH reporting channels remain functioning and confidential.
xi. Provide recommendations for improving work processes, resolving site-level bottlenecks, and ensuring timely delivery of project outputs.
xii. Support E&S Team in the implementation of Resettlement Plans & compensation of PAPs.
xiii. Lead engagement with government entities and lending agencies (World Bank, AIIB) on project progress under Project Director's supervision.

2.4 Phase 4: Works Commissioning, DLP, and Closeout

i. Inspect works alongside the DR&CSC during the Operation & Maintenance (O&M) and Defects Liability Period (DLP), overseeing the completion of punch list entries.
ii. Review of approved As-Built drawings (including GIS shapefiles), O&M manuals, and the Final Payment Certificate.
iii. Assist the Client in compiling revised Planning Commission Forms (PC-I, PC-III, and PC-IV)

3 Qualification And Experience

Bachelor's degree with a major in Electrical / Mechanical Engineering plus a Master's degree in related fields or equivalent from The Higher Education Commission (HEC)-recognized university is required. The postgraduate certificate or diploma in project/construction management shall be preferable. The candidate should have a minimum of 15 years' experience on major civil and mechanical works projects. The candidate should have demonstrated knowledge and experience of project planning, design & construction supervision and contract/project management. Strong knowledge and experience of the International Federation of Consulting Engineers (FIDIC) form of contracts and projects funded or supported by Multilateral Development Banks (MDBs) is a requirement. The candidate should have strong technical and engineering skills and experience including planning, design, preparation of specifications and bidding packages, construction supervision and contract/project management. The candidate should have a good appreciation and knowledge of World Bank safeguards policies and practices, procurement guidelines and regulations, monitoring and evaluation (M&E) and GIS. Prior exposure to the technical

management practices of the World Bank or other multilateral development partners will be considered a strong advantage. Experience working in Pakistan or other countries in Central or South Asia is required. Membership and/or registration with a recognized professional engineering body is a requirement. Good English language communication and writing skills. Good interpersonal and leadership skills. Knowledge of local language (Urdu) is an added advantage.

4 Reporting Line

The Project Manager (Electro-Mechanical) will report to the Project Director, KWSSIP. The Manager will be required to submit monthly activity/progress reports, highlighting key tasks undertaken.

5 Contract duration

The Project Manager (Electro-Mechanical) is initially required to work for the period of three (03) years with an annual review on performance which will form the basis of renewal. The Probation Period will be for 3 months during/up to which the contract may be terminated owing to unsatisfactory performance. The contract can be terminated with one month notice period by either party. The position is based in Karachi with travel requirements to the site as and when required. The Project Manager may also be required to travel to other places or areas within or outside Pakistan on duty carrying out project related tasks including but not limited to meetings, workshops, training, due diligence for procurement, witnessing factory acceptance tests (FAT) etc.

6 Salary and benefits, and conditions of service

Market competitive salary based on qualification and experience will be offered. The salary, benefits will be discussed and agreed with the successful candidate. The contract and conditions of service follow the general conditions of service as stipulated in the Project Operations Manual (POM). These will also be discussed and agreed with the successful candidate.

7 Selection process

An individual will be selected in accordance with process stipulated in Section VII of "Approved Selection Methods: Consulting Services, Clause 7.34, Approved Selection Methods for Individual Consultants under The World Bank Procurement Regulations for IPF Borrowers (Fifth Edition September 2023) available on https://thedocs.worldbank.org/en/doc/6c0602876d68949e80820507d90a14ed-0290012023/original/Procurement-Regulations-September-2023.pdf