

## ANNEX 1: OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

### INDICATIVE TERMS OF REFERENCE FOR PROJECT MANAGEMENT CONSULTANTS Of

#### KOLKATA ENVIRONMENTAL IMPROVEMENT INVESTMENT PROGRAM-TR-2

<p><b>1. Background</b></p>	<p>By a framework financing agreement dated 08th August, 2013 between India acting by its President (“Borrower”) and Asian Development Bank (ADB), ADB has agreed to provide a multitranche financing to the Borrower for the purposes of financing projects under the Kolkata Environmental Improvement Investment Program (KEIIP). The objective of the Project is to have improved and climate resilient water supply, sewerage and drainage service and operational sustainability in selected service areas of KMC.</p> <p>Tranche 2 of KEIIP, amounting to \$200 million, and a technical assistance (TA) grant from Urban Climate Change Resilience Trust Fund in the amount of \$1 million to strengthen Kolkata’s climate resilience through improved planning and disaster risk management. The Tranche 2, supported by the Tranche 2 of the MFF and attached TA, will continue rehabilitation of water supply facilities, and improve the coverage, climate resilience, and operational sustainability of KMC’s S&amp;D and water supply services.</p> <p>The support to project Kolkata Environmental Improvement Investment Program is to achieve the following Project outputs:</p> <ul style="list-style-type: none"> <li>• Output 1: Rehabilitation of inefficient and outdated water supply assets to minimize cost of operation, restoration and enhancement of production capacities, and reduction of water loss in distribution;</li> <li>• Output 2: Construction of sewer network to newly developed areas; and</li> <li>• Output 3: Further development of financial management and project implementation capacity;</li> </ul>
<p><b>2. Objective of the Assignment</b></p>	<p>The objective of the project management consultant is to provide assistance to the program and project management unit (PMU) in management of Tranche-2 of the Kolkata Environmental Improvement Investment Program which is financed by the Asian Development Bank’s (ADB’s) loans under the Multitranche Financing Facility. The investment program will aim to increase service quality and operational sustainability in water supply and sewerage in the Kolkata Municipal Corporation (KMC) area. The investment program will deliver three outputs: (i) inefficient and outdated water supply assets rehabilitated; (ii) continue sewerage and drainage extension to peripheral areas; and (iii) further develop financial and project management capacity.</p>
<p><b>3. Scope of Services, Tasks and Expected Deliverables</b></p>	
<p><b>3.1 Scope of Services, Tasks and Deliverables</b></p>	<p>The consultants will be responsible for effectively leading and taking initiative to manage, execute and implement the investment program, delineate PMU’s method of working, installing procedures, operationalizing procedures and reporting systems, and work with the design and supervision consultant (DSC) and the PMU to prepare contracts, designing and procurement, assisting the PMU in approving all necessary surveys and subproject designs, establishing criteria for supervision, coordination, and management to ensure proper construction supervision by the DSC.</p> <p>The selected Consultant shall be required to cover the following activities include, but not limited to:</p> <ul style="list-style-type: none"> <li>(i) Assist the PMU (Project Management Units) to finalize detailed design and bidding documents prepared by the DSC for the new projects for subsequent ADB financing.</li> <li>(ii) Assist the PMU in preparing annual work plan, detailed implementation schedule and budget using computer based program management tools.</li> <li>(iii) Self assessed Vigilance Note on each and every works contract packages by observing strict vigilance to avoid any possibility of time and budget overrun, in the event of any such</li> </ul>

	<p>possibility issue “Vigilance Note on the Time/Budget overrun” to the Employer for further taking necessary action.</p> <ul style="list-style-type: none"> <li>(iv) Support the PMU in developing mechanisms for accurately estimating the annual contract award and disbursement targets.</li> <li>(v) Verify and evaluate the project performance indicators in ADB’s design and monitoring framework and the service benchmark indicators as issued by the Ministry of Urban Development in accordance with the Gender Action Plan.</li> <li>(vi) Compile and prepare on behalf of the PMU all the reports including progress report for the project in the formats acceptable to ADB and Government of India.</li> <li>(vii) Determine project accounting formulation based on need, prepare necessary specification and assist the PMU in upgradation of Project Accounting System.</li> <li>(viii) Assist PMU in maintaining proper accounts with all ledger and control systems.</li> <li>(ix) Develop and recommend a subsidy strategy for water supply and sewerage service user charges.</li> <li>(x) Develop volumetric and non-volumetric water tariff schedule for domestic household connections with sewerage surcharge, which meets reform agenda on operation and maintenance cost recovery and the subsidy strategy, considering affordability for the poor and vulnerable with complete financial simulation model and affordability analysis.</li> <li>(xi) Develop rules for apportioning costs for water supply and sewerage operations, such as energy and staff not directly involved in operations.</li> <li>(xii) Develop a plan for water meter reading, billing, and collection, with a draft service contracts acceptable to ADB, based on the actual contract being used in India and other countries.</li> <li>(xiii) Draft various rules and regulations, which may be introduced upon completion of water supply and sewerage assets, based on the actual cases found in India and other countries.</li> <li>(xiv) Assist the PMU in the evaluation of bid proposals and preparation of bid evaluation report jointly with the DSC.</li> <li>(xv) Assist the PMU in the negotiation with the successful bidders as and when necessary.</li> <li>(xvi) Assist the PMU in preparing various reports to ADB as defined in the facility administration manual.</li> <li>(xvii) Collaborate with the DSC in the preparation of contract documents.</li> <li>(xviii) Collaborate with the DSC in checking detailed engineering designs and drawings prepared by the contractors.</li> <li>(xix) Assist the PMU in managing and supervising all consultancy contracts (except that of DSC)</li> <li>(xx) Project Management Consultant (PMC) shall have the overall responsibility of Third Party Inspecting Agency (TPIA) for which they have to commission Third Party Inspecting Agency (TPIA), oversee and ensure issuance of certificate/report by Third Party Inspecting Agency (TPIA) under supervision and control of PMC as required at critical stages of identified contracts through Third Party Inspecting Agency (TPIA) for Civil, Mechanical, Electrical and Instrumentation Component of works. TPIA will be operated through “Provisional Sum” component of the contract.</li> <li>(xxi) Project Management Consultant (PMC) shall have the overall responsibility of Third Party Quality and Safety Audit (TPQ&amp;SA) for which they have to commission Third Party Quality and Safety Audit (TPQ&amp;SA), oversee and ensure issuance of certificate/report by the agency under supervision and control of PMC as required at critical stages of identified contracts through the agency. The TPQ&amp;SA will be operated through “Provisional Sum” component of the contract.</li> </ul> <p><b>DELIVERABLES</b></p> <p>The desired outputs &amp; deliverables under this contract are as shown below :</p> <p>The consultant will submit the following reports :</p> <ul style="list-style-type: none"> <li>(i) Draft work plan and detailed implementation schedule for subsequent tranches.</li> <li>(ii) Independent self assessed monthly progress report on all works contract.</li> <li>(iii) Annual contract award and disbursement estimates.</li> <li>(iv) Project performance monitoring system baseline data and their semi-annual updates in accordance with the facility administration manual and Ministry of Urban Development’s service level benchmarking indicators.</li> </ul>
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- (v) Compiled quarterly progress report.
- (vi) Draft subsidy policy on water supply and sewerage service user charges.
- (vii) Draft tariff on volumetric and flat rate water supply and sewerage service.
- (viii) Draft notifications as requested by the PMU.
- (ix) Draft rules for apportioning the common costs of water supply and sewerage operations, such as energy and staff not directly involved in operations.
- (x) A legal agreement template for the project management authority to enter into agreement with the potential clients.
- (xi) Draft bid evaluation reports.
- (xii) Draft contract negotiations minutes.
- (xiii) Finalized contract documents.
- (xiv) Checklist and assessment reports on the detailed engineering designs and drawings prepared by the contractors.
- (xv) Preparation of minutes of meeting for monthly progress review meeting with EA.
- (xvi) Inception report, progress reports, draft final report and final report.
- (xvii) Finalized detailed project reports and detailed engineering design for subsequent loans, if any.

**4. Team Composition & Qualification Requirements for the Key Experts**

**Estimated Input Requirements Inputs (Tranche 2)**

Sl. No.	KEY EXPERT	Type	Inputs
1	Team Leader cum Water Supply Specialist	National	30
2	Electrical Engineer	National	8
3	Civil Engineer (Water Supply)	National	25
4	Civil Engineer (Sewerage and Drainage)	National	25
5	Procurement Specialist	National	10
6	Project Accounts Specialist	National	20
7	Utility Finance Specialist	National	10
8	Water Supply Network Specialist (Hydro-modeling)	National	10
9	Social Safeguard Specialist	National	12
10	Public Communication Strategy and Media Expert	National	20
11	Social Development and Gender Expert	National	24
12	Content Editing, Rewriting and Design Expert	National	20
	<b>Sub Total (A)</b>		<b>214</b>

B	NON - KEY EXPERT	Type	Inputs
	Positions		
1	Engineer (4 nos)	National	180
2	Project Accountant	National	46
3	Office Manager/Accountant	National	46
4	Secretary	National	46
5	AutoCAD Draftsman (2 nos)	National	90
6	Computer Operator (3 nos)	National	138
7	Office Assistant (5 nos)	National	230
	<b>Sub Total (B)</b>		<b>776</b>
<b>Total</b>			<b>990</b>

**Specific Tasks with Preferred Qualifications and Experiences of Key Persons of PMC FOR KEIP TRANCHE-2**

**Position Qualification, Experience, Tasks and Responsibilities**

Position	Qualification & Experience	Tasks and Responsibilities
<p><b>1. Team Leader cum Water Supply Specialist</b></p>	<p>The Team leader cum Water Supply Specialist is to be graduate in civil engineering with Master degree in Public Health Engineer (PHE) with more than 15-year experience in overseeing and managing similar integrated urban water supply and sewerage and drainage related projects including experience of (i) working as Team Leader/ Deputy Team Leader (ii) working in several public health engineering related to water supply /waste water and Sewerage and Drainage works projects at senior positions (iii) having experience of one or more National externally aided project with preferable duration of one year.</p> <p>Age - within 65 years is preferred.</p>	<ul style="list-style-type: none"> <li>• The specialist will be overall responsible for ensuring satisfactory performance of PMC as per the prescribed scope of work of PMC. He will closely interact with DSC on all contracts including design and implementation. The Specialist will also play the role of Water Supply Specialist on design and execution of all ongoing Water Supply contracts.</li> <li>• The Team Leader should ensure overall compliance of all contract agreement in letter and spirit by observing strict vigilance to avoid any possibility of time and budget overrun. In the event of any such possibility he shall issue “Vigilance Note on the Time/Budget overrun” to the Employer for further taking necessary action.</li> </ul>
<p><b>2. Electrical Engineer</b></p>	<p>Graduate in Electrical Engineering with 10-year experience in designing, construction management, supervision and quality assurance of electrical and instrumentation equipments and systems in large integrated water supply and Sewerage and Drainage projects, pipe lines, water treatment plants, pumping stations, sewerage treatment plants, sewage pumping stations etc. Experience of two (2) externally funded projects (ADB or World Bank) is preferred.</p>	<ul style="list-style-type: none"> <li>• The specialist will check Design, Drawings and bidding documents prepared by DSC relating to all electrical works. He will be responsible for all electrical engineering related matters of P.S., STP, WTP etc. and other activities under the overall scope of work of PMC. Periodic visit of ongoing work sites and reporting.</li> </ul>
<p><b>3. Civil Engineers (Water Supply)</b></p>	<p>Graduate in Civil/Public Health Engineering with preferably 10-years experience in designing, construction management, supervision and quality assurance in constructions and systems in large integrated water supply projects, pipe lines, water treatment plants, pumping</p>	<ul style="list-style-type: none"> <li>• The specialist will check Design, Drawings and Contract documents prepared by DSC relating to all civil works. He will be responsible for all civil engineering related matters of P.S., STP, WTP etc. and other activities under the overall scope of work of PMC. The incumbent will regularly visit all ongoing sites, monitor works as per contract and</li> </ul>

		stations etc. Experience of two (2) externally funded projects (ADB or World Bank) is preferred.	report.
	<b>4. Civil Engineers (Sewerage and Drainage)</b>	Graduate in Civil/Public Health Engineering with preferably 10-years experience in designing, construction management, supervision and quality assurance in constructions and systems in large integrated Sewerage and Drainage projects, pipe lines, sewage treatment plants, pumping stations etc. Experience of two (2) externally funded projects (ADB or World Bank) is preferred.	<ul style="list-style-type: none"> <li>The specialist will check Design, Drawings and Contract documents prepared by DSC relating to all civil works. He will be responsible for all civil engineering related matters of P.S., STP etc. and other activities under the overall scope of work of PMC. The incumbent will regularly visit all ongoing sites, monitor works as per contract and report.</li> </ul>
	<b>5. Procurement Specialist</b>	The Procurement Specialist will be an Engineering graduate with preferably 10-year experience in procurement of large scale projects related to works and goods and services. Experience of three (3) externally funded projects (ADB or World Bank) is preferred.	<ul style="list-style-type: none"> <li>The specialist will be responsible for all procurement related activities as per overall scope of work of PMC. He will work in close coordination with DSC for all procurement related matters.</li> </ul>
	<b>6. Project Accounts Specialist</b>	The Project Accounts Specialist will be commerce graduate and Chartered Account (C.A.) with more than 10-year experience of designing, framing and establishing suitable financial management system. Experience of two (2) externally funded projects (ADB or World Bank) preferably for two years will be an advantage.	<ul style="list-style-type: none"> <li>The specialist will be responsible for overall accounts and tax related matters including preparation of relevant reports etc. He will monitor and supervise in the preparation of projections for contract awards, disbursements and advise Project Director as per overall scope of work of PMC. He will also responsible for preparation of Economic And Financial analysis for sub-projects under future tranches.</li> </ul>
	<b>7. Utility finance specialist</b>	The utility finance specialist will be a graduate in Economics or Commerce and MBA in Finance/CA/CMA, or related discipline, with more than 10-year experience of utility financial management, tariff setting for O&M cost recovery, ring fencing of water utilities, and knowledgeable about public sector accounting. Experience of two (2) externally funded projects (ADB or World Bank)	<p>The specialist will</p> <ul style="list-style-type: none"> <li>Develop volumetric and non-volumetric water tariff schedule for domestic household connections with sewerage surcharge on O&amp;M cost recovery, considering affordability for the poor and vulnerable with complete financial simulation model and affordability analysis.</li> <li>develop a plan for water meter reading, billing and collection, with a draft service contracts acceptable</li> </ul>

		<p>for 2 years or more is preferred.</p>	<p>to ADB, based on the actual contract being used in India and other countries.</p> <ul style="list-style-type: none"> <li>• draft various rules and regulations, which may be introduced upon completion of water supply and sewerage assets, based on the actual cases found in India and other countries.</li> <li>• develop rules for apportioning costs for water supply and sewerage operations, such as energy and staff not directly involved in operations.</li> </ul>
	<p><b>8. Water Supply Network Specialist (Hydro-modeling)</b></p>	<p>The Water Supply Network specialist will be graduate in Civil Engineering with preferably 10 years experience in designing, Water-supply/S&amp;D Network of large integrated water supply/S&amp;D projects by using latest CAD software (MIKE, MOUSE/WATER GEM/SEVEN GEM etc.). Experience of working 1 or more externally funded projects (ADB or World Bank etc.) for 1 or more years is preferred.</p>	<ul style="list-style-type: none"> <li>• The task of the WS network specialist shall be to assist EA through periodic reporting on detail design, implementation and work progress on water supply network and its related works.</li> <li>• The WS network specialist will be specifically responsible for Hydro-modeling designs, technical specifications, and bid documents for water supply network projects prepared by DSC for the next and future loans.</li> </ul>
	<p><b>9. Social Safeguard Specialist</b></p>	<p>The Social Safeguard Specialist will be post graduate in Planning/ Social Sciences with 10 or more years' of experience in designing of resettlement plans and framework and experience in implementing resettlement plan conforming to the laws relating to land matters as prevailing in the State as part of donor supported projects, preferably with the ADB and conversant with laws relating to land acquisition, state procedures in implementation of resettlement packages and ADB procedures. Experience of working 1 or more externally funded projects (ADB or World bank etc.) for 3 or more years is preferred.</p>	<ul style="list-style-type: none"> <li>• Assist the PMU to update draft plans, due diligence reports and prepare any new safeguard documents as required</li> <li>• Assist the PMU in the implementation of works and in coordinating with contractor's schedule for civil works for safeguard monitoring</li> <li>• Assist the PMU to conduct public consultations and GAP implementation.</li> <li>• Carry out safeguard orientation and project GRM for PMU staff and contractor as required</li> <li>• Assist, monitor and assess the GRM implementation and records keeping by the contractors and PMU staff, provide recommendation as required.</li> <li>• Coordinate workshops, Focused Group Discussions (FGDs) and community consultation during design and implementation phase.</li> <li>• Assist in carrying out all required baseline surveys.</li> </ul>

			<ul style="list-style-type: none"> <li>• Prepare performance-monitoring reports.</li> <li>•</li> </ul>
	<p><b>10. Public Communication Strategy and Media Expert</b></p>	<p>The Public Communication Strategy and Media Expert will be post graduate degree (Masters or equivalent) in journalism, communications and media management with 10 years' or more experience of proven record of working in the field of corporate as well as development communication and digital media technology. Experience of working 1 or more externally funded projects (ADB or World bank etc.) for 3 or more years is preferred.</p>	<ul style="list-style-type: none"> <li>• Assist the PMU to selection of Target Group of Public for Public Communication and Design strategy for the effective communication and assist the Team Leader in accomplishing the desired task in professional manner.</li> <li>• Assist the PMU to maintain and upgrade website, face book and twitter account.</li> <li>• Assist the PMU for consolidation and summarization of comments, suggestions and grievances posted on the project website, face book and twitter account and in other forms on regular basis.</li> <li>• Assist the PMU to provide support for development of all digital content using in-depth analytical knowledge of the tools and technologies to deliver news and information online.</li> <li>• Assist the PMU for strategizing the digital content for broadcasting/telecasting (including electronic and print) about the project in accordance with the gender action plan and communication strategy.</li> </ul>
	<p><b>11. Social Development and Gender Expert</b></p>	<p>The Social Development and Gender Expert will be post graduate degree (Masters or equivalent) in Sociology, Economics, Mass-communication, Geography, Social Work or related subject with 5 years' or more experience of proven record of working in the field of Social Development and Gender Action Plan preferably in Urban Areas. Experience of working 1 or more externally funded projects (ADB or World bank etc.) for 1 or more years is preferred.</p>	<ul style="list-style-type: none"> <li>• Assist the PMU for the preparation of Gender Action Plan and its implementation following necessary ADB guidelines and advice on gender, poverty and other related social issues.</li> <li>• Assist the PMU for the selection of target population for survey, collection and analysis of the survey data, designing questionnaire, sampling method and introducing necessary social surveys and analysis of survey data and preparation of reports.</li> <li>• Assist the PMU in conducting awareness campaign, workshops and focus group meeting at specified interval of time of the project following the gender action plan and the communication strategy.</li> <li>• Assist the PMU recommending on specified detail action plan for raising awareness among the</li> </ul>

			beneficiaries.
	<b>12. Content Editing, Rewriting and Design Expert</b>	The Content Editing, Rewriting and Design Expert will be post graduate degree (Masters or equivalent) in journalism/literature with 5 years' or more experience of proven record of working in the relevant field in urban areas regarding organization writing and designing using computer graphics design. Experience of working 1 or more externally funded projects (ADB or World Bank etc.) for 1 or more years is preferred.	<ul style="list-style-type: none"> <li>• Assist the PMU for Rewriting, editing contents generated by other departments and by the public communication strategy expert.</li> <li>• Assist the PMU for designing reports, Template and standard digital and print presentation materials, brochures, posters, flyers and billboards as per the requirement of the assignment.</li> <li>• Assist the PMU for writing contents considering gender sensitive components of non-revenue water management manual and sewage pumping station operation and maintenance manual.</li> <li>• Assist the PMU in preparing and designing of Monthly newsletter of KEIIP</li> <li>• Assist the PMU in preparing the newspaper articles on the project on regular basis.</li> </ul>

5. Indicative Reporting Requirements & Time Schedule for Deliverables	The desired outputs & deliverables under this contract are as shown below :				
	Sl. No.	Milestones	No of Copies and Form	Date of Submission	Recipient
	1.	Inception report -- draft final report and final report	Five (5) Hard copies and 1 CD ROM	Within 1 month from commencement	PMU
	2.	Draft work plan and detailed implementation schedule for subsequent tranches.	Two (2) Hard copies and 1 CD ROM	Within 1 month from commencement	PMU
	3.	Preparation and submission of "Vigilance Note on the Time/Budget overrun" to the Employer	Two (2) Hard copies and 1 CD ROM	As and when consultant feels necessary	PMU
	4.	Independent self assessed monthly progress report on all works contract.	Five (5) Hard copies and 1 CD ROM	On every month	PMU
	5.	Annual contract award and disbursement estimates.	Five (5) Hard copies and 1 CD ROM	Annually	PMU
	6.	Project performance monitoring system baseline data and their semi-annual updates in accordance with the facility administration manual and Ministry of Urban Development's service level benchmarking indicators.	Five (5) Hard copies in initial and further copies as and when required 1 CD ROM	On every 6 months	PMU
	7.	Compiled quarterly progress report.	Five (5) Hard copies and 1 CD ROM	At the end of every quarter	PMU



	8.	Draft subsidy policy on water supply and sewerage service user charges.	Three (3) copies and 1 CD ROM	Hard	Within 3 months from the commencement	PMU
	9.	Draft tariff on volumetric and flat rate water supply and sewerage service.	Three (3) copies and 1 CD ROM	Hard	Within 6 months from the commencement	PMU
	10.	Draft notifications as requested by the PMU.	Two (2) copies and 1 CD ROM	Hard	As and when required	PMU
	11.	Draft rules for apportioning the common costs of water supply and sewerage operations, such as energy and staff not directly involved in operations.	Two (2) copies and 1 CD ROM	Hard	Within 8 months from the commencement	PMU
	12.	Monthly progress reports, draft final report and final report.	Five (5) copies and 1 CD ROM	Hard	Every month	PMU
	13.	Project Completion Report	Five (5) copies and 1 CD ROM	Hard	Before the completion of the assignment	PMU
6. Client's Input and Counterpart Personnel	<p><b>a) The following Services, Facilities and Property shall be provided by the Client to the Consultant</b></p> <ul style="list-style-type: none"> <li>➤ The Client will provide office space and necessary equipments including desk and chair</li> <li>➤ The client will help PMC to have all relevant and available reports, documents, maps, photographs etc.</li> </ul> <p><b>(b) The following Professional and Support Counterpart Personnel shall be assigned by the Client to the Consultant:</b></p> <ul style="list-style-type: none"> <li>➤ Team for effective coordination with the Consultant</li> </ul>					
7. Client will provide the following inputs, project data and reports to facilitate preparation of the Proposals	<p>The Client will provide all the available reports and documents for the study of the consultants. The client will also assist the consultants to obtain requisite available information from any other department/organization. However the responsibility of such collection would lie with the consultants.</p>					