

## TERMS OF REFERENCE FOR CONSULTANTS

### I. Background

1. The Asian Development Bank (ADB) has been supporting the Government of Georgia (government) to rehabilitate, reconstruct and expand the water supply and sanitation (WSS) system under the Urban Services Improvement Investment Program (USIIP).<sup>1</sup> To complement USIIP, the government plans to modernize the organization and capacity of the United Water Supply Company of Georgia (UWSCG) to better manage and bring efficiency in use of the assets.
2. To assess the UWSCG's operation and maintenance (O&M) of the new systems, ADB conducted a study in Kutaisi, the largest city assisted by USIIP. It identified key O&M deficiencies in nonrevenue water and energy management and recommended two key actions: (i) provision of modern equipment and systems; and (ii) engagement of a private operator for effective change management, processes and practices.<sup>2</sup>

### II. Proposed Project

3. The project impact is improved health of residents of selected areas of Georgia.<sup>3</sup> The project outcome is efficient, reliable and sustainable WSS service delivered in selected UWSCG service areas. The proposed project aims to minimize operational inefficiencies of UWSCG and maximize asset utilization. The project will contribute to improved operational efficiency of UWSCG through (i) high-level technology (HLT) facilitation; (ii) organizational and institutional strengthening, including piloting a suitable public-private partnership (PPP) arrangement in selected USIIP-supported areas.<sup>4</sup> The project will identify and prepare capital investments that require urgent and immediate works, and are of high priority for O&M and other essential works.
4. For more direct and explicit operational impact and intervention, ADB and the government will jointly explore a PPP potential of candidate project areas where substantial infrastructure investments have been made by the government. The government has broadly identified a candidate project area for the PPP pilot. In parallel, HLT will be introduced in the selected USIIP-supported areas and the central office of UWSCG for more efficient communications, information sharing and workflow, as well as effective organizational change.

### III. Scope of Services

5. The proposed project is included in the 2020 program in the Country Operations and Business Plan 2019–2021 for Georgia.<sup>5</sup> The consultants for the ADB transaction technical assistance (TRTA) will prepare the WSS service improvement project. The deliverables include, among others, the preparation of necessary documentation to meet all project preparation and safeguard policy requirements of ADB and secure all Georgia clearances. ADB procedures must be followed and reports produced in the formats of the ADB report and recommendation of the President (RRP) and the linked documents.

<sup>1</sup> ADB. 2011. *Georgia: Urban Services Improvement Investment Program*. Manila. ADB Board of Directors approved the \$500 million multi tranche financing facility with total six tranches processed as of September 2018.

<sup>2</sup> ADB. 2013. *TA8556-REG: Supporting the Cities Development Initiative for Asia*. Manila.

<sup>3</sup> Government of Georgia. 2011. *Water Supply and Sanitation Sector Development Plan 2011–2020*. Tbilisi.

<sup>4</sup> Public Private Partnership (PPP) law was approved in May 2018.

<sup>5</sup> ADB. 2018. *Country Operations Business Plan: Georgia, 2019–2021*. Manila.

## A. Major Outputs and Activities

6. The key outputs and activities are in Table 1.

**Table 1: Summary Outputs and Activities**

Major Outputs	Delivery Dates	Key Activities with Milestones
1. Monthly reports	End of each month	1.1 Summary of information on consultants deployed, reports submitted, list of activities and status, bottlenecks, and mitigation plans
2. Inception report	February 2019	2.1 Review of existing project and policies 2.2 Submission of workplan and activity timeline
3. Interim report	April 2019	3.1 Field assessments, surveys, analyses 3.2 Submission of due diligence reports including technical, operational, organizational, institutional, financial, economic, procurement, environmental, social, gender and involuntary resettlement
4. Draft final report	June 2019	4.1 Submission of revised due diligence reports and draft RRP linked documents
5. Final report	September 2019	5.1 Completion of RRP linked documents 5.2 Support to enhance project readiness and implementation

PPP = public-private partnership, RRP = Report and Recommendation of the President to the Board of Directors, TOR = terms of reference

Source: Asian Development Bank estimates.

7. TRTA team will complete feasibility study and due diligence to ensure that the ensuing loan complies with ADB and government requirements.<sup>6</sup> The deliverables will be the joint responsibility of project implementing unit (PIU)/Implementing Agency (IA), international and national consultants. The draft deliverables and briefing reports will be prepared and issued to executing agency (EA), IA and ADB as required on a timely basis (Table 2).

**Table 2: Key Technical Deliverables**

SN	Report/Deliverable	Due Date (months from start)
1	<b>Development Intent and Stakeholder Engagement</b> <ul style="list-style-type: none"> <li>• Scope of studies and surveys</li> <li>• Preliminary plan for stakeholder engagement—consultations and awareness</li> </ul>	1
2	<b>Technical reports</b> <ul style="list-style-type: none"> <li>• Nonrevenue water and energy management assessment and project area selection report</li> <li>• List and technical specifications for O&amp;M equipment (IA and each selected area)</li> <li>• List and technical specifications for smart systems and ICT solutions for asset, financial, customer service (billing and payment), HR management (IA and each selected area)</li> <li>• ICT infrastructure assessments</li> <li>• Pilot PPP project and contractual arrangements</li> <li>• Long term sector plan</li> <li>• Organizational restructuring plan</li> <li>• Institutional development plan including sector policy, institutional and legal gap analysis and proposal for development and/or enhancement</li> <li>• Capacity and skills development plan (IA and each selected area and key stakeholder)</li> <li>• High priority capital investment program (urgent and immediate works)</li> </ul>	2–6

<sup>6</sup> The TRTA will be posted in the business opportunities section of ADB's website in September 2018.



3	Feasibility Study Report (technical, economic, financial, environment, social safeguards and gender)	6
4	Performance-based public-private partnership (PPP) contract(s)	6
5	<ul style="list-style-type: none"> <li>Bidding documents for goods</li> <li>Bidding documents for smart systems and ICT solutions including SCADA, GIS and other management information systems</li> <li>Bidding document for works</li> </ul>	6
6	Terms of reference for consultancy package(s)	3

Note. To be amended from time to time based on TRTA developments.

Source: ADB estimates.

## B. Implementation Arrangements

8. The Ministry of Regional Development and Infrastructure of Georgia will be the EA. UWSCG will be the IA and will supervise and coordinate consultant activities with a focus on consultant selection and supervision, and monitoring of their input quality. ADB will help facilitate implementation and supervision of the TRTA-funded activities. Disbursements under the TRTA will be done in accordance with the ADB's Technical Assistance Disbursement Handbook (May 2010, amended from time to time). The TRTA team is expected to be mobilized in December 2018.

## C. Reporting

9. The TRTA consulting team (including individual consultants' outputs) through the Team Leader will report to ADB Project Officer and submit the required reports (Tables 1 and 3) based on agreed work plan and outputs/deliverables. The team will also submit a monthly summary report on consolidated team inputs. The consultants shall present key findings in workshops (participated by all key stakeholders) to be organized at the inception, interim and draft final report stage to review the inception, interim and the draft final reports.

10. All reports shall be written in English. The draft and final versions of each of the inception, interim and final reports will be translated into Georgian and be submitted at the same time as the English versions to ensure that stakeholders have sufficient time to prepare comments. The TRTA team shall provide three printed copies of each report. The electronic versions of the reports shall be provided in both MS Word and PDF formats. The consulting firm shall also provide ADB the final electronic version of all source files under self-explanatory file names and directory structure (including data collected, spreadsheets and models etc.). Comments will be received from ADB Project Officer within 10 working days. The reports shall be revised and submitted within 2 weeks after receiving comments. Printed PowerPoint presentations that will be distributed during workshops shall be produced in both English and Georgian. The consulting firm is expected to procure translation services in relation to workshop delivery and outputs.

11. The consulting firm will organize and participate in meetings and workshops with ADB, the EA, IA and stakeholder groups to foster quality project design and to develop local capacity. Workshops shall be held to present the results of major project deliverables (i.e. inception, interim and draft final reports) but the TRTA team is encouraged to conduct additional focus group discussions, interviews and stakeholder sessions as required and to document the need for such additional workshops in its proposal.

**Table 3: Deliverables required for ADB Project Approval/Loan Processing**

SN	Deliverable	Due Date (months from start)
1	Draft RRP including linked documents below	6
2	Sector Assessment (summary)	4
3	Project administration manual	6
4	Contribution to the ADB results framework	3
5	Development coordination	8
6	Financial management assessment and financial analysis	6
7	Economic analysis	6
8	Country economic indicators	1
9	Summary poverty reduction and social strategy	6
10	Gender analysis, collection of baseline data and action plan	6
11	Safeguard documents (environment, involuntary resettlement, indigenous peoples)	6
12	Risk assessment and risk management plan	6
13	Climate change assessment	3
14	PPP assessment and road map	6
15	Technical assessment including collection of baseline data	6
16	Project procurement risk assessment and strategic procurement planning	6

Source: ADB staff estimates.

#### **D. Consulting Services Inputs**

12. TRTA will be implemented over a period of 12 months from the TRTA team mobilization. The TRTA will require 14 positions and 29 person-months of international consulting services, and 10 positions and 27 person-months of national consulting services on an intermittent basis (Table 4). ADB will engage one consulting firm and individual consultants in accordance with ADB Procurement Policy (2017, as amended from time to time) and the Staff Instructions-ADB Administered Consulting Services. The quality and cost-based selection method, using 90:10 quality cost ratio will be followed using simplified technical proposals. The goods procured will be transferred to UWSCG at TRTA completion.

**Table 4: Summary Consulting Services Requirement**

	International (ADB)	Person-months
1	WSS Utility Operations Specialist (Team leader)	4.0
2	ICT Specialist	2.0
3	Asset management and customer service specialist	2.0
4	Energy and wastewater management specialist	1.0
5	Nonrevenue water specialist	1.5
6	SCADA specialist	2.0
7	Organizational and Institutional Development Specialist	4.0
8	PPP Specialist	4.0
9	Financial Management and Analysis Specialist	3.0
10	Economist	1.0
11	Procurement Specialist	1.5
12	Environment Specialist	1.0
13	Social Development Specialist (Resettlement and Gender)	1.0
14	Public Relations and Communications Specialist	1.0
	<b>Total</b>	<b>29.0</b>

<b>National (ADB)</b>		<b>Person-months</b>
1	WSS Engineer and Project Coordinator	7.0
2	ICT Expert	3.0
3	WSS Systems Expert	2.0
4	Electrical Engineer	2.0
5	Institutional and Training Expert	3.0
6	PPP Legal Expert	3.0
7	Financial and Economic Expert	2.0
8	Procurement and Contract Management Expert	2.0
9	Gender and Social Development Expert	2.0
10	Behavior Change Communications Expert	1.0
<b>Total</b>		<b>27.0</b>

ICT = information, communications and technology; PPP = public-private partnership; WSS = water supply and sanitation

Source: ADB staff estimates.

13. The Cities Development Initiative for Asia (CDIA) will continue to prepare the prefeasibility of the candidate project areas.<sup>7</sup> (Table 5) The TRTA team will closely coordinate with CDIA consultants for the TRTA deliverables.

**Table 5: Summary CDIA Key Expert Positions**

<b>International</b>		<b>Person-months</b>
1	Water Management and Distribution Specialist	1.0
2	Asset and Customer Service Specialist	1.0
3	Energy and Wastewater Management Specialist	1.0
4	Hydraulic Modeling and GIS Specialist	0.75
5	Leaks Detection Specialist	0.75
6	SCADA Management Specialist	0.5
<b>Total</b>		<b>5.0</b>

Source: ADB staff estimates.

#### **E. Terms of Reference for International Consultants**

14. On-the- job trainings of IA (or UWSCG) and key stakeholders will form an essential part of the TRTA team activities. Consulting services will include but will not be limited to the following.

15. **WSS Utility Operations Specialist/Team Leader** (international, 4.0 person-months). The team leader (TL) will preferably have a master's degree in engineering, finance, management (or equivalent) and 15 years of experience in undertaking similar projects, and preferably experience of leading ADB project preparation and of working in the Central and West Asia region. Experience as a private operator (under PPP arrangement) in developing countries is a strong advantage. The TL is expected to be well acquainted with ADB procedures for feasibility study, procurement and safeguards policy. As TL, the specialist will work closely with the team and be responsible to:

- (i) Manage the TRTA team and activities, including coordinating with individual consultants;
- (ii) Manage relationships with the government and ADB;
- (iii) Prepare various documentations required for loan processing;
- (iv) Submit reports and deliverables with quality and on time;
- (v) Facilitate and support ADB missions.

16. As a utility operations specialist, he/she will, among others:

<sup>7</sup> ADB. 2013. *Technical Assistance for Supporting the Cities Development Initiative for Asia*. Manila.



- (i) Confirm project areas based on criteria/parameters for selection;
- (ii) Confirm and incorporate recommendations of CDIA prefeasibility study;
- (iii) Plan and oversee all required studies, survey, and activities;
- (iv) Finalize strategies for technology facilitation and system modernization and organization and institutions development, and develop preferred option to feasibility study level;
- (v) Ensure ICT interoperability and conforming of adopted technical and operational standards/procedures with national norms and international standards;
- (vi) Review water and wastewater demand projections and hydraulic calculations of engineer and assess additional works necessary for network optimization;
- (vii) Assess, identify gaps and develop roadmap and plans for the organization, management, system, processes, and capacity at UWSCG headquarters and project areas;
- (viii) Assess, identify gaps and amendments required for a sector policy, institutional, regulatory, legal and financial frameworks;
- (ix) Identify gaps of technical guidelines, standards and protocols of WSS sector;
- (x) Organize, lead and facilitate workshops, trainings, study tour, road show, awareness and communications programs based on the needs assessments with the team;
- (xi) Present to EA/IA (a) experiences in NRW and energy management in the world with the numerical results in NRW reduction and cost saving; and (b) the process of NRW and energy management suitable to the project area;
- (xii) Carry out consultations with key stakeholders (national and local governments, NGOs, civil society, etc.) on the (a) social and political acceptability of the various private sector participation options with a focus on how the different options meet the need of consumers; (b) the technical acceptability of the options among potential private sector operators;
- (xiii) Prepare procurement plan and documents for goods, services and works for O&M, technology solutions and organization/institutions development including PPP, and urgent and immediate capital investments, contract packaging, project implementation arrangement, schedule, and scope of work/terms of reference for consultants/contractors/operator;
- (xiv) Identify a list of assurance, which ADB should seek assurance from the government in the loan agreement;
- (xv) Assist IA in issuing and/or evaluating bid submissions.

17. **ICT Specialist** (international, 2.0 person-month) should at least 10 year(s) of working experience in ICT and smart technologies related field, and preferably 1–4 years of experience specializing in water utilities information systems. He/she will, among others:

- (i) Review the current ICT infrastructure and environment of IA and project areas, including fixed and mobile telecommunication networks, sensors, CCTVs and city government's data/control centers;
- (ii) Do a gap analysis identifying key issues in realizing a smart city vision in project areas based on a benchmark study with at least two international best practices, and ensure interoperability;
- (iii) Review and analyze the current ICT practices and capacity based on data, surveys, and interviews;
- (iv) Recommend multiple options with cost estimates using different technology and operation and maintenance models;

- (v) Work with others to develop a target model of a smart system with appropriate smart technologies and ICT solutions covering asset and O&M management, NRW analysis, smart metering, billing, accounting and financial management, decision support system, etc.;
- (vi) Develop a road map and a 5-year action plan to implement the smart system including delivery of workshops/trainings on smart systems in coordination with TL;
- (vii) Prepare specifications and quantities and work with procurement specialist to prepare bidding documents for smart systems;

18. **Asset Management and Customer Service Specialist** (international, 2.0 person-months) should be a chartered/professional engineer with broad experience in the implementation of WSS projects, with at least 10 years of experience in undertaking similar experience in international context. The asset management system (AMS) and customer service management system (CMS) should be fully integrated with ICT system and communicate with SCADA, GIS, customer system, and generate automatized maintenance work order, and ensure interoperability. Key tasks are, among others:

- (i) Review asset and customer service management strategies, organization, systems, processes and practices of IA and project areas;
- (ii) Develop a roadmap and 5-year action plan to implement an AMS and CMS including the required resources and technical support;
- (iii) Prepare a feasibility study on AMS and CMS;
- (iv) Define integrated AMS and Key Performance Indicators (KPI) to monitor AMS performance, including KPIs monitoring framework and reporting;
- (v) Define a commercial losses reduction plan including on-the-job training and other relevant workshops/trainings in coordination with TL;
- (vi) Prepare specifications and quantities and work with procurement specialist to prepare bidding documents.

19. **Energy and Wastewater Management Specialist** (international, 1.0 person-months) will be a chartered/professional engineer with at least 5 years' experience in energy and wastewater management including system audits, and provision of expert advice to water utilities. He/she will be responsible for the following tasks:

- (i) Review organization and strategies for energy and wastewater management (EWM) of IA and project areas;
- (ii) Review wastewater installations in project areas and identify infrastructure gaps;
- (iii) Assess the operational and capacities needs to operate EWM in project areas;
- (iv) Assess current energy use and energy management practices using the existing ADB energy screening tool to run the energy audit;
- (v) Identify urgent capital investments needs of the highest priority and clearly justified;
- (vi) Develop a roadmap and 5-year action plan to implement EWM improvements including the required resources and technical support;
- (vii) Define integrated EMS and KPIs to monitor EMS performance, including KPIs monitoring framework and reporting;
- (viii) Work with TL to conduct relevant trainings;
- (ix) Prepare specifications and quantities and work with procurement specialist to prepare bidding documents.



20. **Nonrevenue Water (NRW) Specialist** (international, 1.5 person-months) will be a chartered/professional engineer with a minimum of 10 years of experience in leaks detection and NRW reduction projects. Key activities are as follows:

- (i) Collect all necessary information required to determine the (a) daily volume of NRW, (b) average supply time, (c) average pressure, (d) number of service connections, and (e) length of mains;
- (ii) Review NRW management organization and strategies of IA and project areas and identify infrastructure gaps for network optimization;
- (iii) Review ongoing leak detection and repair actions implemented by IA and project areas and identify gaps and needs;
- (iv) Identify urgent capital investments needs of the highest priority and clearly justified;
- (v) Define network monitoring practices using sectorization/district metering and night flow analysis;
- (vi) Define capacities development needs and program for NRW management;
- (vii) Define an integrated NRW monitoring system and KPIs to monitor NRW performance, including KPIs monitoring framework and reporting;
- (viii) Develop a roadmap and 5-year action plan to implement NRW program including the required resources and technical support;
- (ix) Together with TL, conduct trainings on NRW;
- (x) Prepare specifications and quantities and work with procurement specialist to prepare bidding documents.

21. **SCADA Specialist** (international, 2.0 person-months) will have a preferably post graduate mechanical engineering degree or equivalent and 5 years of experience in planning, investigating, and modelling SCADA systems for similar projects. Ensuring interoperability, SCADA platform architecture should be open to accept additional applications and systems for future improvement in WSS network management. This should be an open system which can be expanded on a modular basis as required and is highly extensible to accommodate planned expansion. It should also be capable of managing the new remote terminal unit (RTU) sites, new regional control centers, and communications upgrades. The specialist's responsibilities include:

- (i) Define objectives for WSS management, SCADA system, Operation Control Center (OCC)—a computer based centralized management system—and software (upgrades or new) for HQ and project areas;
- (ii) Define the scope of the system including: (a) data monitoring—remote sensing/GIS and direct measurement of water levels, flows, gates positions, rainfall; (b) decision support system software; (c) automation of gates; (d) power supply requirement and options, e.g., mains plus backup solar; and (e) data communication options, e.g., cellular-mobile phone network;
- (iii) Develop network sectorization program;
- (iv) Together with TL, conduct trainings on SCADA systems;
- (v) Prepare specifications and quantities and work with the procurement specialist to prepare bidding documents.

22. **Organizational and Institutional Development Specialist** (international, 4.0 person-months) will have at least a master's degree in relevant field with at least 10 years' experience in undertaking similar projects. The consultant will have demonstrated ability in institutional, organizational and human resources (HR) capacity assessment and in developing strategies for institutional and organizational change. Organizational restructuring experience in water utilities is an advantage. He/she will, among others, work closely with IA and the TRTA team to:



- (i) Identify and analyze gaps of sector strategic documents and plans, i.e., sector policy, regulation and legal frameworks, and identify amendments and development required;
- (ii) Assess GNERC's institutional capacity and develop a timebound action plan for improvement to address gaps and weaknesses;
- (iii) Assess IA's functional effectiveness and efficiency, and recommend and reform measures for institutional strengthening, including organization structure, corporate governance, delegation of power and greater commercialization;
- (iv) Assess IA's management and business processes in investment approval, procurement, long-term plans, annual budgets and financial management, asset management, and HR management (staff recruitment, staff benefits, performance management and propose recommendations for improvement;
- (v) Review job descriptions by staff category/type, and assess staffing needs and requirements by evaluating the total number of staff, staffing patterns and allocation of staff resources for IA and project areas (and by gender); conduct skills gap analysis; recommend improving HR management, including recruitment, performance management, (re)training and training facilities;
- (vi) Propose KPIs for HR and performance management and develop a 5-year roadmap and a timebound action plan with cost estimates for IA and project areas;
- (vii) Identify specific technical capacity development needs, program and costs for IA and project areas for O&M; recommend cost-effective and gender-balanced options for sustainable learning and development for the sector and IA;
- (viii) Work with TL to develop and conduct trainings;
- (ix) Prepare terms of reference for consultancy (and/or procurement if any) packages for organizational restructuring and institutions development and related project management and implementation support.

23. **PPP Specialist** (international, 4.0 person-months) will have (i) at least a master's degree in Business Administration or related discipline, (ii) more than 10 years of similar PPP project experience, (iii) fluency in written and spoken English, and (iv) the ability to deliver high quality written outputs. This specialist will recommend most suitable PPP contractual arrangement with supporting analyses and justification for Georgia WSS sector and ensure firm EA/IA buy-in and commitment with workable and agreed KPIs that balances interests, incentives and risks of the parties involved. The specialist will work with the TRTA team for smooth coordination and quality outputs. The specialist will support EA/IA develop, design and prepare a successful PPP. Key tasks are:

- (i) Work with TL to develop project area selection criteria and determine the optimal size of the final project area in accordance with the available budget for the project for PPP and HLT pilots agreed with ADB and EA/IA;
- (ii) Assess PPP feasibility of WSS sector and IA in Georgia, including PPP demands, revenue generation potential, role of the private sector, risks and mitigation measures;
- (iii) Identify in coordination with TL and legal expert, a time-bound road-map and action plan for the implementation of the preferred option including approval of amendments to legislations, preparation of all transaction documents, selection of private sector operator, and sourcing and approval of investment financing;
- (iv) Recommend the preferred PPP for IA in project areas and describe the institutional arrangements relating to: (a) asset ownership, asset management, and the operations of the services; (b) form of agreement between the various parties; (c)

- responsibility for the financing of the development of the assets; (d) responsibility for monitoring operator's performance; (e) revenue and/or risk sharing arrangement, and (f) responsibility for tariff monitoring;
- (v) Conduct trainings, workshops, and roadshow(s) to the management and relevant staff of IA, and key government officials on PPP with focus on identifying, quantifying and managing PPP risks, and ensuring maximum private interests and uptake;
- (vi) Work closely with organization development specialist to assess institutional and organizational capacities, efficiency and governance (including but not limited to budget, financial and HR management) of project areas and propose optimal PPP arrangement;
- (vii) Work with financial management and analysis specialist to develop financial models for financial projections and PPP transaction structuring, and assist EA/IA to obtain necessary government clearances;
- (viii) Work with TL to arrange and implement information campaigns and public deliberations on PPP;
- (ix) Produce a comprehensive feasibility study to enable the government to determine PPP related project costs, affordability limits, risks and their costs, optimal value for money methods of delivery;
- (x) Provide the necessary technical, legal and financial (in close liaison with PPP financial, legal experts and the government) advisory support for preparation of a PPP agreement, government's internal approval, administration of the bidding process, and bid evaluation;
- (xi) Prepare a concept of the performance-based PPP contract and establish main contract and remuneration principles, including, but not be limited to: (a) scope of responsibility, works, procurement, and technology transfer; (b) definition of performance indicators; (c) split of fixed and performance-based fee; and (d) evaluation method and criteria;
- (xii) Discuss and agree the concept, and particularly the evaluation method and criteria with ADB and IA;
- (xiii) Prepare draft versions of the following documents: (a) procurement notice, (b) request for prequalification and prequalification criteria; (c) Requests for Proposals (RFPs), and (d) main contract(s) document acceptable to ADB.

24. **Financial Management and Analysis Specialist** (international, 3.0 person-months) will have a degree in accounting, finance, or a related field, and will have a recognized professional accountancy qualification. The expert should have at least 15 years' experience, including in financial due diligence (FDD) and project and PPP financial projection and analyses. The expert will conduct FDD in accordance with ADB's requirements. Relevant guidance is available at <http://www.adb.org/projects/operations/financial-management-resources>. He/she will work among others, closely with PPP specialist for the key activities outline below.

- (i) Conduct financial management assessment of EA/IA and recommend measures, including (a) assessing capacity for planning and budgeting, management and financial accounting, reporting, auditing, internal controls, and information systems (c) propose disbursement and funds-flow arrangements, and (d) concluding on the financial management risk rating and identifying and confirming measures for addressing identified deficiencies;
- (ii) Support the preparation and agreement of cost estimates and a financing plan based on verifiable data and sufficient to support project implementation;



- (iii) Prepare financial projections and conduct financial analyses and incremental recurrent costs of IA, project and PPP to determine sustainability and review cost-recovery and tariffs, including affordability;
- (iv) Conduct financial evaluations (financial cost-benefit analyses with financial internal rates of return) including sensitivity analyses of IA, project and PPP;
- (v) Propose financial KPIs to be incorporated in financial covenants where significant risks are identified to project financial sustainability covering operating performance, liquidity and debt serviceability;
- (vi) Assess and reach agreement on financial reporting, auditing and public disclosure arrangements for the project, and, as appropriate, identify and agree arrangements for receiving financial statements from EA/IA.
- (vii) Review past and potential government subsidy programs, fiscal arrangement and fiscal capacity of the country to sustain the investment program;
- (viii) Work with organization development specialist to identify organizational and skills gap in financial management and staff needs and prepare capacity development program in financial management;
- (ix) Propose a project and PPP financial performance system and KPIs;
- (x) Assist in drafting the relevant sections of RRP and linked documents and provide relevant reports as needed.

For PPP related activities, among others,

- (i) Work with PPP specialist on financial structuring and estimating explicit and implicit financial costs to the government;
- (ii) Build financial model(s) for PPP and evaluate financial models, both in the feasibility studies and in proposals submitted as part of the competitive bidding process to ensure that affordability, financial sustainability, and commercial viability;
- (iii) Propose a suitable government support for PPP, e.g., grants/subsidies, loans, equity investments (or in the form of viability gap funding), and provide rationale for such fund-flow arrangement;
- (iv) Contribute to development of management information system or equivalent in financial management;
- (v) Support PPP specialist in all necessary due diligence activities and inputs to various documentations requested by government and ADB;
- (vi) Work with TL and PPP specialist and provide inputs to various documentations and reports.

25. **Economist** (international, 1.0 person-month) will have at least master's degree in economics or equivalent with 10 years in undertaking project economic assessment with minimum 5 years of work experience with international finance institutions in infrastructure development projects and experience in Central Asia will be an advantage and ADB-finance WSS projects. In accordance with all ADB relevant guidelines which include the Guidelines for the Economic Analysis of Projects (2017), Handbook for Integrating Poverty Impact Assessment in the Economic Analysis of Projects (2001), Handbook Guidelines for the Economic Analysis of Water Supply Projects (1999), Handbook for Integrating Risk Analysis in the Economic Analysis of Projects (2002), and ADB's Criteria for Subsidies, the economist will undertake the following actions:

- (i) Conduct socioeconomic surveys for baseline information and prepare economic analyses for the project following ADB's guidelines for economic analysis<sup>8</sup> and cost-benefit analysis<sup>9</sup>;
- (ii) Review urban and socio-economic development plans, describe macroeconomic and sectoral context within which the ensuing project will be implemented, and establish the rationale for public sector and ADB involvement;
- (iii) Works with financial management and analysis specialist to review the tariff policy, tariff determination guidelines and other policies, and standards in WSS sector;
- (iv) Work with the social development specialist to develop a willingness to pay survey for WSS and conduct tariff affordability analysis, and assess the performance of past tariffs to identify gaps and improvements;
- (v) Prepare economic analysis in compliance with ADB requirements including 10 Key Areas of Economic Analysis of Investment projects covering macroeconomic and sector assessment, demand analysis, least economic cost analysis, cost and benefit analysis, sensitivity analysis, risk analysis, distribution analysis including poverty impact ratio, sustainability analysis, and assessment of subsidies or other financial instruments to ensure access to all proposed beneficiaries. If subsidies are needed, provide their rationale and justification;
- (vi) Assist in drafting the relevant sections of RRP and linked documents and provide relevant reports as needed.

26. **Procurement Specialist** (international, 1.5 person-months) will hold preferably a graduate degree in a relevant discipline, i.e., procurement, engineering, law, management or business, with more than 8 years of experience in procurement. Experience in ADB procurements or other multilateral development bank-funded projects and acquaintance with Georgia procurement procedures will be a strong advantage, preferably with experience in undertaking country procurement assessments and national procurement reform programs. The specialist will report to TL. He/she will, among others:

- (i) According to ADB's Guidance Note- Strategic Procurement Planning, undertake all assessments required, submit Strategic Procurement Planning;
- (ii) Undertake project procurement risk assessment and prepare Project Procurement Risk Assessment and Management Plan (P-RAMP);
- (iii) Based on P-RAMP, prepare the capacity building program to strengthen EA/IA's capacity in undertaking procurement and address other risks identified;
- (iv) Prepare master bidding documents for different types of contracts under the project, including RFP for selection of project implementation consultant;
- (v) Conduct market assessment for any special procurement arrangement, e.g., PPP and propose remedy for any limitations;
- (vi) Prepare the linked document to RRP as required by TL.

27. **Environment Specialist** (international, 1.0 person-month) will have preferably a master's degree in environment science or equivalent and minimum 5 years of experience in preparing environmental impact assessment (EIA) or initial environmental examination (IEE) for multilateral development banks. Experience in Central Asia and ADB projects in water supply and sanitation will be a strong advantage. The specialist will, among others:

- (i) Consult with the team to confirm the project location, design and activities;

<sup>8</sup> <http://lnadbg1.asiandevbank.org/edr0019p.nsf/webview?OpenView&Start=1&count=500>

<sup>9</sup> <http://www.adb.org/documents/cost-benefit-analysis-development-practical-guide>



- (ii) Perform scoping activities to identify potential environmental impacts, and identify potential impacts from the project to and from the environment;
- (iii) Assess institutional arrangement to implement proposed mitigation measures;
- (iv) Assist EA/IA prepare initial environment examination (IEE) report and/or environment management plan (EMP);
- (v) Consult with concerned ministries/agencies for compliance with national standards and conduct public consultations with affected people (materials in local language) and create a grievance mechanism in coordination with the team;
- (vi) Ensure the environmental assessment reports conform to ADB Safeguard Policy Statement (2009).

28. **Social Development Specialist (Resettlement and Gender)** (international, 1.0 person-months) will have a post graduate degree in social science or equivalent with at least 10 years work experience in involuntary resettlement issues, indigenous peoples, gender mainstreaming, and poverty reduction. Relevant experience in Central Asia, knowledge of the local language and ADB projects are highly desirable. The specialist will prepare all required social documents including (i) poverty and social analysis (PSA) using ADB's Handbook on Social Analysis (2007) and ADB's Handbook for Incorporation of Social Dimensions in Projects (1994); and (ii) gender action plan, participation plan, resettlement plans, and indigenous peoples plans, in accordance with ADB Safeguard Policy Statement (2009). The specialist will work closely with the team in carrying out the PSA and developing and administering surveys. The specialist will, among others:

- (i) Provide guidance on socioeconomic survey, census survey and social impact assessment, ensuring the sex-disaggregation of data;
- (ii) Prepare questionnaire and conduct stakeholder consultation, focus group discussions, informant interviews and use other methodologies as needed;
- (iii) Prepare analysis of survey results, which should include a gender analysis;
- (iv) Prepare and finalize the resettlement plan, summary of poverty reduction and social strategy, social development action plan, gender action plan, indigenous peoples impact categorization, and involuntary resettlement impact categorization and plans;
- (v) Screen and categorize the project in terms of involuntary resettlement and indigenous peoples by using the categorization checklists;
- (vi) Prepare due diligence report on land acquisition and resettlement;
- (vii) for subprojects involving land acquisition and resettlement, prepare a land acquisition and resettlement plan, disclosure and grievance procedures;
- (viii) Coordinate with the team to ensure that mitigation measures are integrated into the project design;
- (ix) Provide technical guidance to the national gender and social development consultant in the collection of sex-disaggregated baseline data and the conduct of gender analysis and identify gender targets/indicators to be included in the DMF and gender action plan;
- (x) Ensure that resettlement and gender-related information are well considered and included in the project/stakeholder communication plan;
- (xi) Assess the capacity of EA/IA to screen impacts, prepare and implement safeguards including gender and recommend capacity development programs to develop or enhance safeguards knowledge and skills of EA/IA;
- (xii) Provide inputs on social dimensions, gender, and safeguard component on all project documents, and make arrangements for monitoring and evaluation of safeguards and gender related activities;

- (xiii) Recommend KPIs and monitoring mechanisms on social development and gender;
- (xiv) Ensure the quality of the PSGA, SPRSS, and GAP by guiding and/or refining the outputs of the national gender and social development consultant;
- (xv) Assist in drafting the relevant sections of RRP and linked documents and provide relevant reports as needed.

29. **Public Relations and Communications Specialist** (international, 1.0 person-months) will have post-graduate qualifications in social science, anthropology, communications, with a minimum of 8 years of experience in similar projects with excellent writing and presentation skills in English. Relevant experience in Central Asia and knowledge of the local language is desirable. The specialist will coordinate with social development specialist in carrying out PSA using ADB's Handbook on Social Analysis (2007) and ADB's Handbook for Incorporation of Social Dimensions in Projects (1994) and prepare summary poverty reduction and social strategy (SPRSS), in accordance with ADB Safeguard Policy Statement (2009). The specialist will work closely with TL mainly to:

- (i) Review of past communication campaigns conducted since 2011 on water usage, conservation and sanitation;
- (ii) Review end-user behaviors on water use, collection and conservation, solid waste disposal and management, and health and sanitation habits, payment practices and receptiveness to WSS systems reforms, tariffs and metering, and identify barriers and determinants that may affect users' willingness to adopt new behaviors;
- (iii) Design and manage public communication programs for public awareness, consultation and changes in consumer/public behaviors;
- (iv) Apply effective communication tools and techniques, including analysis and use of research data and recommend capacity building programs on communication management and consumer behavior management and consumer services management;
- (v) Develop and roll out a communications strategy to promote the adoption of improved individual and community behavior on water usage and conservation, tariffs, metering, and sanitation in project areas;
- (vi) Provide inputs and prepare reports as required by TL.

## F. NATIONAL CONSULTANTS

30. **WSS Engineer and Project Coordinator** (national, 7.0 person-months) will have a degree in civil or hydraulic engineering or equivalent with at least 10 years of experience in preparing and implementing WSS projects. The expert will be experienced with the analysis and optimization of WSS network systems, pumping stations, reservoir capacity, and NRW management. Experience in cost estimate of WSS is required. The expert will support the TL with overall management duties of the national consultants, help lead the feasibility study and design process, and liaise with EA/IA and project stakeholders. The main tasks of the expert will be:

- (i) Support the TL in managing the overall assignment and activities, and maintaining close coordination with EA/IA, and be responsible for the national consultants' outputs;
- (ii) Collect and compile all relevant studies and data, and provide oral and written translations of project communications;
- (iii) Support timely submission of the deliverables;



- (iv) Support feasibility studies and survey required;
- (v) Support technical studies and design works as required for feasibility, and review drawings, cost estimates and specifications;
- (vi) Support the team with information, data and layouts, rights-of-way for pipelines, location and surface of any infrastructure included in the project requiring permanent or temporary occupation of land;
- (i) Assist to coordinate fieldwork and survey activities, ensuring that appropriate local procedures, requirements and protocols are followed;
- (ii) Provide weekly summary progress reports for circulation to ADB, EA/IA, TL (and other team members) outlining the activities performed, outputs developed, any emerging issues and where possible, recommended mitigation measures. Be available at reasonable times to discuss these issues, as necessary;
- (iii) Coordinate the development and submission of project reports and other outputs as required throughout the project duration. Assist where necessary in ADB missions and in other meetings relating to the project.

31. **ICT Expert** (national, 3.0 person-months) will have at least 10 years of working experience in ICT and smart technologies related field, and preferably 1-4 years of experience specializing in water utilities information systems. The expert will, among others:

- (i) Support the international ICT specialist in carrying out assignments;
- (ii) Collect necessary data, reference documents and other necessary information and provide them to the international ICT specialist;
- (iii) Review the existing ICT systems of IA, including basic IT systems and network, MIS, and GIS in the context of the country's overall ICT environment;
- (iv) Assist to develop an integrated WSS MIS suggesting appropriate high-level technologies and off-the-shelf IT solutions for IA covering WSS asset management, O&M management, NRW analysis, smart metering, billing, accounting and financial management, decision support system, etc.;
- (v) Assist to develop road maps to implement the integrated water management information system in 5-year time frame;
- (vi) Support the team for the preparation of procurement documents of ICT and smart technologies related component of the project;
- (vii) Prepare and coordinate the implementation of the organization and strategies for customer billing and metering program in project areas.

32. **WSS Systems Expert** (national, 2.0 persons months) will have be an engineer and have 10 years of experience in WSS systems operations and design. He/she will work closely with the TL and is the project coordinator who will check the work and inputs of national team, particularly:

- (i) Support developing population projections and WSS demand in project areas;
- (ii) Review supplies, layouts and conceptual designs of WSS network improvements, including district monitoring zones, flow meters, pressure monitoring systems;
- (iii) Support field surveys; inspect all existing WSS facilities in project areas in consultation with the team;
- (iv) Review project technical data and records, cost estimates including unit rate analysis;
- (v) Review all specifications, drawings, quantities and measures conform with national standard norms as well as with international requirements as needed;
- (vi) Prepare standard spreadsheet/database to facilitate quantity and cost estimation for engineering works required under the project.

33. **Electrical Engineer** (national, 2.0 person-month) The specialist will have preferably a suitable post-graduate qualification in electrical engineering (or similar) and at least 10 years of applicable experience. The expert will be guided by the energy and WW specialist. The engineer's main tasks include:

- (i) Support the energy management specialist and other technical team members to determine power/energy requirement of engineering works, for wells, water treatment plants, pumping stations, pressurized pipes pipe and waste water treatment plant;
- (ii) Provide necessary inputs required to estimate in line with international standards energy demand/cost savings to the team;
- (iii) Propose cost effective options to save energy: (a) effective metering arrangements for bulk supply of power, (b) optimized operations of systems, and (c) estimated design modifications to save energy; (d) use of renewable energy as solar.
- (iv) For the preferred option, prepare feasibility level designs, and support the team to prepare drawings, cost estimates and draft specifications;
- (v) Advise on procurement arrangements.

34. **Institutions and Training Expert** (national, 3.0 person-months) will have relevant tertiary qualifications as well as minimum 8 years of experience in similar projects. The expert will work closely with the international organization development specialist.

- (i) Compile all necessary documents for comprehensive and detailed institutional, organizational and human resources capacity assessment of IA and project areas;
- (ii) Describe the current structure, job descriptions, grades; review existing staff qualification and experience and identify current and required capacity, and additional skills for the project; compare a job grading/evaluation and salaries and benefits benchmarked with other institutions of a similar nature; establish the qualification profile of each staff member;
- (iii) Describe the work procedures, efficiency in time and use of resources and their influence on the quality of services;
- (iv) Describe effectiveness of performance management of IA and its field offices and procedures of managing resources and delivering services;
- (v) Develop a draft transition plan and budget for the support needed for PPP pilot project areas;
- (vi) Identify organizational weaknesses within the management, planning, administration, and O&M groups influencing the performance of the departments and field offices;
- (vii) Develop training needs of staff to accomplish their duties; identify recommended scope for future training programs for the: (a) management, and (b) technical and operational staff of IA and project areas;
- (viii) Assist preparing outlines of the capacity development programs and matrix-type summaries and cost estimates of such programs with implementation schedule for institutional and organizational strengthening.

35. **PPP Legal Expert** (national, 3.0 person-months) will have: (i) Juris Doctor or another degree permitting practicing law in Georgia, and will preferably have: (ii) at least 10 years of related international project experience in legal advisory, and in preparing, reviewing, advising on and negotiating contracts, (iii) at least three years of experience in WSS sector and PPP related transactions, (iv) familiarity with PPP related policy/laws/rules/decrees in Georgia or Central and



West Asia countries, (v) demonstrated ability to work congenially and productively in a big team environment, (vi) fluency in written and spoken English and Georgian, and (vii) the ability to deliver high quality written outputs on a timely basis. Experience with performance-based management/service contracts will be a strong advantage. The expert will be guided by international PPP specialist. Key activities are:

- (i) Assess the legal and regulatory framework of Georgia for PPP implementations in the WSS sector;
- (ii) Identify opportunities and constraints for PPP arrangements in WSS sector of Georgia.
- (iii) Assist the international PPP expert in delivering various presentations/workshops for EA/IA, project areas, and other project stakeholders;
- (iv) Assist in structuring PPP transaction, with recommendation of optimal transaction structures for various PPP possibilities;
- (v) Support in structuring PPP transactions with due consideration for requirements of the national legislation, market interests, capacities of private sector counterparts, and prevailing business practices.
- (vi) Assist in preparing RFPs, model contracts and other formal documents needed for implementation of the selected PPP transactions.
- (vii) Assist in developing and implementing information campaigns and public deliberations about the PPP;
- (viii) Assist in tendering and other modes of contracting within the scope of the targeted PPP arrangement(s).

36. **Financial and Economic Expert** (national, 2.0 person-months) will have a master's degree in economics or finance or equivalent field with at least 5 years of relevant experience in project financial and economic analysis. He/she is expected to be conversant with the ADB procedures for financial and economic analysis of ADB funded projects. Knowledge on the government's procedures and methodologies of financial and economic analysis of WSS projects is required. The expert will be guided by the international financial and economic specialists and primarily carry out the following:

- (i) Collect data, provide inputs and assist in the analysis of tariff, affordability, and sustainability;
- (ii) Support assessment of financial performance and financial management assessment of the EA/IA;
- (iii) Assist EA/IA and TL in the process of approval of the project by the MOF and other national commissions by providing competent answers to any clarification to enquiries set by MOF and other ministries/agencies;
- (iv) Assist in carrying out economic analysis based on ADB's Guidelines for the Economic Analysis of Projects and assess their economic viability including sensitivity analyses;
- (v) Review outputs of socio-economic survey about ability-to-pay/affordability;
- (vi) Assist in preparing economic cost-benefit assessments and economic analysis of the proposed projects;
- (vii) Support estimating economic internal rate of and net present value, with sensitivity analysis and quantitative risk analysis;
- (viii) Provide inputs for the evaluation of the project's economic risks and propose mitigation measures;
- (ix) Assist in the preparation of economic justification of the project;
- (x) Provide inputs to periodic and final reports as needed.

37. **Procurement and Contract Management Expert** (national, 2.0 person-months) will preferably have 8 years' experience as a procurement and contracts management specialist on major civil works and goods. Proven credentials in procurement management and knowledge of ADB or other MDBs will be an added advantage. Bachelor's degree with a major in Civil Engineering, law, contracts, purchasing, management or equivalent with master's degree in Civil Engineering, law, contracts/procurement, management or equivalent is desirable. Under the guidance of international procurement specialist, the expert will, among others:

- (i) Carry out a project procurement risk assessment following the ADB requirements and procedures;
- (ii) Conduct interviews based on project procurement risk assessment questionnaire; identify gaps, and recommend appropriate undertakings;
- (iii) Suggest suitable procurement and packaging; coordinate and prepare procurement plan incorporating comments from the team;
- (iv) Ensure that methods of procurement for international and national bidding follow respective ADB and/or national procurement procedures;
- (v) Provide inputs for the preparation of arrangements for project implementation and terms of reference for consultants being selected for project implementation;
- (vi) Prepare draft scope of works for international and national consultants required for project implementation;
- (vii) Provide inputs to capacity development and training programs in procurement;
- (viii) Conduct a market risk assessment using available data on similar procurement and contracts in the sector as well as the qualification and performance of local contractors and suppliers as necessary; and
- (ix) Justify the specific procurement arrangements and packaging based on the project procurement and market risks assessed;
- (x) Prepare standard spreadsheet/database to facilitate quantity and cost estimation for goods, works and services required under the project.

38. **Gender and Social Development Specialist** (national, 2.0 person-months) will have a degree in Gender and Development, sociology, anthropology or related social science, (MSc degree or higher preferred) with at least 5 years work experience in gender and social development, involuntary resettlement issues, and indigenous peoples. He/she will assist the international social development specialist to:

- (i) Collect sex-disaggregated baseline data in target areas/ communities, including household-level data such as, but not limited to water use, source, costs; types of sanitation facilities; household heads; education level; occupations; income, division of labor in the house, etc.;
- (ii) Work with the social survey team to ensure that household, demographic, and other baseline data that will be collected are sex-disaggregated, survey methodology is gender mainstreamed and gender analysis is provided;
- (iii) Lead the collection of qualitative information on communities that may not be included in the survey, such as, women's perspectives on the potential benefits of the project, gender division of labor in the communities and household and see if the project will help ease women's housework, potential income-generating opportunities during and after the project, and other gender-relevant information;
- (iv) Conduct a gender analysis and identify potential gender entry points and gender indicators for the DMF and GAP;
- (v) Collect potential quantitative and qualitative benefits for women, the poor and other vulnerable sectors of the community, from the provision of water supply and



- sanitation, and solid waste management; including employment, health, and other benefits;
- (vi) Conduct key informant interviews with government representatives (EA/IA) and communities;
- (vii) Draft the Poverty, Social and Gender Analysis Report (PSGA);
- (viii) Consult with women's groups of the project targeted areas, female beneficiaries, and female staff of UWSCG to identify potential gender design features and lessons learned from previous projects;
- (ix) Draft the Summary Poverty Reduction and Social Strategy (SPRSS) based on the findings of the PSGA;
- (x) Develop the gender action plan (GAP);
- (xi) Work with the Behavior Change Communications Specialist to ensure that all messages and communications are gender-sensitive, and all consultations include women.

39. **Behavior Change Communications Specialist** (national, 1.0 person-months) will have a degree in social science, communications, public affairs, or other relevant tertiary qualifications with at least 5 years work experience in the field of social development and communications. The specialist will have the ability to interact effectively across socio-political, economic and cultural affiliations. With the guidance of international communications specialist, he/she will:

- (i) Assist in socio-economic survey, census survey and social impact analysis;
- (ii) Conduct a stakeholder mapping and analysis;
- (iii) Prepare a questionnaire and conduct stakeholder consultation, focus group discussions, informant interviews and use other methodologies as needed;
- (iv) Prepare analysis of survey results
- (v) Conduct a qualitative research to identify end-user (sex-disaggregated) behaviors on water use, collection and conservation, solid waste disposal and management, and health and sanitation habits, payment practices and receptiveness to WSS systems reforms, tariffs and metering, and identify barriers and determinants that may affect users' willingness to adopt new behaviors;
- (vi) Conduct a rapid review of past communication campaigns conducted since 2011 on water usage, conservation and sanitation;
- (vii) Develop and roll out a communications strategy to promote the adoption of improved individual and community behavior on water usage and conservation, tariffs, metering, and sanitation in project areas;
- (viii) Assist in drafting the relevant sections of RRP and linked documents and provide relevant reports as needed.