

TERMS OF REFERENCE FOR CONSULTANTS

The Asian Development Bank (ADB) will be the executing agency for the technical assistance (TA). ADB will implement the TA through Urban Development and Water Division, Central and West Asia Department, in close collaboration with the head and members of the Water Sector Group.

A. Water Sector Information Technology Specialist (international, 1.5 person-months)

The Water Sector Information Technology (IT) Specialist will review and benchmark all commonly used asset management systems (AMS) for water supply currently available on the market against ADB and water utility requirements and make a recommendation to ADB on most suitable and cost-effective AMS for implementation for water supply in Georgia. Tasks include:

- (i) market review of commonly used AMS for water supply systems currently available;
- (ii) review the advantages and disadvantages of off-the-shelf vs. custom-made bespoke AMS;
- (iii) develop a long list of AMS for water supply systems;
- (iv) review AMS long-list functionality against current and future requirements for:
 - a. typical DMC water utilities, and
 - b. specifically, for the selected utility;
- (v) benchmark AMS functionality against required functionality;
- (vi) review AMS lifetime costs, including;
 - a. license cost,
 - b. ongoing annual support maintenance costs, and
 - c. sustainability of cost structure for DMC utilities;
- (vii) in consultation with ADB, develop a short list (maximum 3) of AMS for water supply systems;
- (viii) carry out in-depth review of functionality and lifetime costs of shortlist;
- (ix) make a recommendation to ADB on most appropriate, cost-effective, and sustainable AMS for water utilities in Georgia;
- (x) prepare draft and final AMS benchmark report; and
- (xi) lead presenter of AMS knowledge event 1 at ADB headquarters.

1. Outputs and Deliverables

The Water Sector IT Specialist will produce the following deliverables:

- (i) an inception report within 15 days of the contract start, presenting work plan and methodology;
- (ii) a review of AMS containing a shortlist for in-depth assessment;
- (iii) report addressing all relevant issue for consideration including a recommendation on most appropriate, cost-effective, and sustainable AMS for water utilities in Georgia; and
- (iv) a knowledge event where the engaged consultant will lead both preparation and participation.

2. Minimum Qualification Requirement

The Water Sector IT Specialist should have:

- (i) a bachelor's degree in engineering, science, IT or equivalent; advanced degree preferable;

- (ii) at least 15 years of general experience and 5 years of specific experience in the field of AMS with particular emphasis on water supply;
- (iii) experience with multilateral development institutions; and
- (iv) excellent English written and oral communication skills and proven skills with coordinating and synthesizing outputs.

B. Asset Management System Specialist (international, 3 person-months)

The AMS specialist will lead on implementing an AMS for water supply in a selected city in Georgia. The specialist must have demonstrated experience in the selected AMS (to be decided once component A is complete). Tasks include:

- (i) develop specifications for dedicated AMS hardware;
- (ii) procure selected AMS software license and annual support maintenance (3 years) on behalf of water utility;
- (iii) procure hardware on behalf of water utility;
- (iv) install AMS software on hardware;
- (v) manage the national consultant to populate the AMS:
 - a. identify and collate all available water supply asset data (electronic and hardcopy),
 - b. knowledge elicit asset data from utility staff-members,
 - c. identify asset gaps and determine asset data survey requirements,
 - d. identify best infilling techniques,
 - e. fully populate AMS using data collated, elicited, collected, and infilled, and
 - f. identify pipe replacement and reason;
- (vi) commission asset data survey, including asset condition survey;
- (vii) correlate historical pipe replacement with asset attribute;
- (viii) carry out asset rehabilitation and replacement programming and prepare financing plan;
- (ix) review utility policy framework for asset management and prepare recommendations for including AMS;
- (x) carry out hands-on training in AMS and processes in Georgia;
- (xi) lead presenter for AMS knowledge event 2 in ADB headquarters;
- (xii) prepare, draft, and finalize AMS implementation report;
- (xiii) prepare, draft, and finalize AMS training report; and
- (xiv) address ad hoc AMS maintenance issues as and when required.

1. Outputs and Deliverables

The AMS Specialist will produce the following deliverables:

- (i) an inception report within 15 days of the contract start, presenting work plan and methodology;
- (ii) a monthly report, outlining work completed and issues;
- (iii) a fully functional AMS of the water supply system for a town in Georgia;
- (iv) an AMS implementation report;
- (v) an AMS training report; and
- (vi) a knowledge event where the engaged consultant will lead both preparation and participation.

2. Minimum Qualification Requirement

The AMS Specialist should have:

- (i) a bachelor's degree in engineering, science, IT or equivalent; advanced degree preferable;
- (ii) at least 15 years of general experience and 5 years of specific experience in the field of AMS with particular emphasis on water supply;
- (iii) experience with multilateral development institutions; and
- (iv) excellent English written and oral communication skills and proven skills with coordinating and synthesizing outputs.

C. Technical Support (Data Input and Events Support) (national, 10 person-months)

The national consultant will collate all available water supply asset data, elicit or source all required asset data, and populate the AMS for water supply, and assist in hands-on asset management training. Tasks include:

- (i) identify and collate all available water supply asset data (electronic and hardcopy), including pipe replacement and reason;
- (ii) knowledge elicit asset data from utility staff members;
- (iii) identify asset gaps and determine asset data survey requirements;
- (iv) manage asset data survey;
- (v) identify best infilling techniques;
- (vi) fully populate AMS using data collated, elicited, collected, and infilled;
- (vii) develop training program and prepare training material;
- (viii) prepare training logistics, including venue, IT facilities, etc.;
- (ix) invite trainees;
- (x) setup training and trouble-shoot;
- (xi) provide translation services (verbal and written);
- (xii) obtain training feedback from trainees; and
- (xiii) support on ad hoc AMS maintenance issues as and when required.

1. Outputs and Deliverables

The Technical Support consultant will produce the following deliverables:

- (i) a monthly report, outlining work completed and issues; and
- (ii) a fully functional AMS of the water supply system for a town in Georgia.

2. Minimum Qualification Requirement

The Technical Support consultant should have:

- (i) a bachelor's degree in engineering, science, IT or equivalent; advanced degree preferable;
- (ii) at least 10 years of general experience with particular emphasis on water supply utilities;
- (iii) experience with multilateral development institutions; and
- (iv) excellent English written and oral communication skills.