PROCUREMENT DOCUMENT FOR PERFORMANCE BASED WATER LOSS REDUCTION

Based on the:

WORLD BANK'S STANDARD PROCUREMENT DOCUMENT

Prequalification Document for Procurement of Works



Prequalification Document for Procurement of

Performance-Based Leakage Reduction and Management Services

Issued on: [insert date]

Invitation for Prequalification No.: [insert number]

ICB No.: [insert number]

Employer: *CLIENT*

Country: COUNTRY



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Preface

This Prequalification Document is to a large extent based on the World Bank's Standard Prequalification Document for Procurement of Works (PQD) except where specific considerations for the procurement of performance base leakage management services have required a change.



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Part 1. Prequalification Procedures

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PART 1 – Prequalification Procedures



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Part 1. Prequalification Procedures

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Section I. Instructions to Applicants

A. General

- 1. Scope of Application
- 1.1 In connection with the Invitation for Prequalification indicated in Section II, Prequalification Data Sheet (PDS), the Employer, as defined in the **PDS**, issues this Prequalification Document (PQD) to applicants interested in bidding for the works described in Section VI, Scope of Works. The number of contracts and the name and identification of each contract, and the International Competitive Bidding (ICB) number corresponding to this prequalification, are provided in the **PDS**.
- 2. Source of Funds
- 2.1 The Borrower or Recipient (hereinafter called "Borrower") indicated in the **PDS** has applied for or received financing (hereinafter called "funds") from the International Bank for Reconstruction and Development or the International Development Association (hereinafter called "the Bank") towards the cost of the project named in the **PDS**. The Borrower intends to apply a portion of the funds to eligible payments under the contract(s) resulting from the bidding for which this prequalification is conducted.
- 3. Fraud and Corruption
- 3.1 The Bank requires that Borrowers (including beneficiaries of Bank loans), as well as Applicants, Bidders, Suppliers, Contractors, and Consultants under Bank-financed contracts, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuit of this policy, the Bank:
 - (a) Defines, for the purposes of this provision, the terms set forth below as follows:
 - (i) "corrupt practice" means the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the procurement process or in contract execution;
 - (ii) "fraudulent practice" means a misrepresentation or omission of facts in order to influence a procurement process or the execution of a contract;
 - (iii) "collusive practice" means a scheme or arrangement between two or more bidders, with or without the



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knowledge of the Borrower, designed to establish bid prices at artificial, noncompetitive levels; and

- (iv) "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the procurement process or affect the execution of a contract;
- (b) will reject a proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for the Contract in question;
- (c) will cancel the portion of the loan allocated to a contract if it determines at any time that representatives of the Borrower or of a beneficiary of the loan engaged in corrupt, fraudulent, collusive or coercive practices during the procurement or the execution of that contract, without the Borrower having taken timely and appropriate action satisfactory to the Bank to remedy the situation;
- (d) will sanction a firm or individual, including declaring them ineligible, either indefinitely or for a stated period of time, to be awarded a Bank-financed contract if it at any time determines that they have, directly or through an agent, engaged, in corrupt, fraudulent, collusive or coercive practices in competing for, or in executing, a Bank-financed contract; and
- (e) will have the right to require that a provision be included in Bidding Documents and in contracts financed by a Bank loan, requiring bidders, suppliers, contractors and consultants to permit the Bank to inspect their accounts and records and other documents relating to the bid submission and contract performance and to have them audited by auditors appointed by the Bank.
- 4. Eligible Applicants
- An Applicant shall be a private, public or government owned legal entity, subject to ITA 4.6, or any combination of them in the form of association(s) including Joint Venture (JV) with the formal intent, as evidenced by a letter of intent), to enter into an agreement or under an existing agreement. In the case of a JV, unless otherwise specified in the **PDS**, (i) all parties shall be jointly and severally liable, and (ii) there shall be no limit on the number of partners.
- 4.2 The eligibility criteria listed in this Clause 4 shall apply to the Applicant, including the parties constituting the Applicant, i.e.,



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its proposed partners, subcontractors or suppliers for any part of the Contract including related services.

- 4.3 An Applicant may have the nationality of any country, subject to the restrictions pursuant to sub clause 4.10. An Applicant shall be deemed to have the nationality of a country if the Applicant is a citizen, or is constituted, incorporated or registered and operates in conformity with the provisions of the laws of that country, as evidenced by its Articles of Incorporation or Documents of Constitution, and its Registration Documents.
- 4.4 Applicants and all parties constituting the Applicant shall not have a conflict of interest. Applicants shall be considered to have a conflict of interest, if they participated as a consultant in the preparation of the design or technical specifications of the Works that are the subject of this prequalification. Where a firm, or a firm from the same economic or financial group, in addition to consulting, also has the capability to manufacture or supply goods or to construct works, that firm, or a firm from the same economic or financial group, cannot normally be a supplier of goods or works, if it provided consulting services for the contract corresponding to this prequalification, unless it can be demonstrated that there is not a significant degree of common ownership, influence or control.
- 4.5 An Applicant shall submit only one application in the same Prequalification process, either individually as an Applicant or as a partner of a joint venture. No Applicant can be a subcontractor while submitting an application individually or as a partner of a joint venture in the same Prequalification process. A Subcontractor in any application may participate in more than one application, but only in that capacity. An Applicant who submits, or participates in, more than one application will cause all the applications in which the Applicant has participated to be disqualified.
 - An Applicant that is under a declaration of ineligibility by the Bank in accordance with ITA 3, at the date of submission of the application or thereafter, shall be disqualified. The Bank maintains a list of firms and individuals that have been sanctioned by the Bank pursuant to Sub-Clause 3.1 (c) and are not eligible to participate in procurement financed by the Bank. The list is regularly updated, its address is specified in the **PDS**
- 4.7 Government-owned entities in the Employer's Country shall be eligible only if they can establish that they are legally and financially autonomous, and operate under commercial law,



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and that they are not dependent agencies of the Employer.

- 4.8 Applicants shall not be under execution of a Bid –Securing Declaration in the Employer's Country.
- 4.9 Applicants and all parties constituting the Applicant shall provide such evidence of their continued eligibility satisfactory to the Employer, as the Employer shall reasonably request.
- 4.10 Applicants from an eligible country may be excluded if, (a) as a matter of law or official regulations the Borrower's country prohibits commercial relations with that country, provided that the Bank is satisfied that such exclusion does not preclude effective competition for the supply of goods or the contracting of works required; or (b) by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, the Borrower's country prohibits any import of goods or contracting of works or services from that country, or any payments to persons or entities in that country. Section VI, Eligible countries provide lists of ineligible countries pursuant to this Sub Clause 4.10.
- 5. Eligible Goods and Related Services
- 5.1 All goods and related services to be supplied under the Contract to be financed by the Bank shall have as their origin in any country in accordance with Section V, Eligible Countries.

B. Contents of the Prequalification Document

- 6. Sections of Prequalification

 Document
- 6.1 The document for the prequalification of Applicants (hereinafter "prequalification document") consists of parts 1 and 2 which comprise all the sections indicated below, and should be read in conjunction with any Addendum issued in accordance with ITA 8.

PART 1 Prequalification Procedures

- Section I. Instructions to Applicants (ITA)
- Section II. Prequalification Data Sheet (PDS)
- Section III. Qualification Criteria and Requirements
- Section IV. Application Forms
- Section V. Eligible Countries

PART 2 Works Requirements

- Section VI. Scope of Works
- 6.2 The "Invitation for Prequalification Applications" issued by



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- the Employer is not part of the prequalification document. A sample form is provided as an attachment to this Prequalification Document for information only.
- 6.3 The Employer accepts no responsibility for the completeness of the prequalification document and its addenda unless they were obtained directly from the Employer.
- 6.4 The Applicant is expected to examine all instructions, forms, and terms in the Prequalification Document and to furnish all information or documentation required by the Prequalification Document.
- 7. Clarification of Prequalification Document
- A prospective Applicant requiring any clarification of the 7.1 Prequalification Document shall contact the Employer in writing at the Employer's address indicated in the PDS. The Employer will respond in writing to any request for clarification provided that such request is received no later than fourteen (14) days prior to the deadline for submission of applications. The Employer shall forward copies of its response to all applicants who have acquired the prequalification document directly from the Employer including a description of the inquiry but without identifying its source. Should the Employer deem it necessary to amend the prequalification document as a result of a clarification, it shall do so following the procedure under ITA 8 and in accordance with the provisions of ITA 17.2.
- 8. Amendment of Pre-qualification Document
- 8.1 At any time prior to the deadline for submission of applications, the Employer may amend the Prequalification Document by issuing addenda.
- 8.2 Any addendum issued shall be part of the Prequalification Document and shall be communicated in writing to all who have obtained the prequalification document from the Employer.
- 8.3 To give prospective Applicants reasonable time to take an addendum into account in preparing their applications, the Employer may, at its discretion, extend the deadline for the submission of applications.

C. Preparation of Applications

9. Cost of 9.1 The Applicant shall bear all costs associated with the



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Applications

preparation and submission of its application. The Employer will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the prequalification process.

10. Language of Application

10.1 The application as well as all correspondence and documents relating to the prequalification exchanged by the Applicant and the Employer, shall be written in the language specified in the **PDS.** Supporting documents and printed literature that are part of the application may be in another language, provided they are accompanied by an accurate translation of the relevant passages in the language specified in the **PDS**, in which case, for purposes of interpretation of the application, the translation shall govern.

11. Documents Comprising the Application

- 11.1 The application shall comprise the following:
 - (a) Application Submission Form, in accordance with ITA 12;
 - (b) documentary evidence establishing the Applicant's eligibility to prequalify, in accordance with ITA 13;
 - (c) documentary evidence establishing the Applicant's qualifications, in accordance with ITA 14; and
 - (d) any other document required as specified in the **PDS**.
- 12. Application Submission Form
- 12.1 The Applicant shall prepare an Application Submission Sheet using the form furnished in Section IV, Application Forms. This Form must be completed without any alteration to its format.
- 13. Documents
 Establishing the
 Eligibility of the
 Applicant
- 13.1 To establish its eligibility in accordance with ITA 4, the Applicant shall complete the eligibility declarations in the Application Submission Form and Forms ELI (eligibility) 1.1 and 1.2, included in Section IV, Application Forms.
- 14. Documents
 Establishing the
 Qualifications of
 the Applicant
- 14.1 To establish its qualifications to perform the contract(s) in accordance with Section III, Qualification Criteria and Requirements, the Applicant shall provide the information requested in the corresponding Information Sheets included in Section IV, Application Forms.
- 15. Signing of the Application and Number of
- 15.1 The Applicant shall prepare one original of the documents comprising the application as described in ITA 11 and clearly mark it "ORIGINAL". The original of the



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Copies

application shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Applicant.

15.2 The Applicant shall submit copies of the signed original application, in the number specified in the **PDS**, and clearly mark them "COPY". In the event of any discrepancy between the original and the copies, the original shall prevail.

D. Submission of Applications

- 16. Sealing and Identification of Applications
- 16.1 The Applicant shall enclose the original and the copies of the application in a sealed envelope that shall:
 - (a) bear the name and address of the Applicant;
 - (b) be addressed to the Employer, in accordance with ITA 17.1; and
 - (c) bear the specific identification of this prequalification process indicated in the PDS 1.1;
 - 16.2 The Employer will accept no responsibility for not processing any envelope that was not identified as required.
- 17. Deadline for Submission of Applications
- 17.1 Applicants may always submit their applications by mail or by hand. When so specified in the **PDS**, applicants shall have the option of submitting their applications electronically, in accordance with electronic application submission procedures specified in the **PDS**. Applications shall be received by the Employer at the address and no later than the deadline indicated in the **PDS**. A receipt will be given for all applications submitted.
- 17.2 The Employer may, at its discretion, extend the deadline for the submission of applications by amending the Prequalification Document in accordance with ITA 8, in which case all rights and obligations of the Employer and the Applicants subject to the previous deadline shall thereafter be subject to the deadline as extended.
- 18. Late Applications
- 18.1 Any application received by the Employer after the deadline for submission of applications prescribed in ITA 17 will be returned unopened to the Applicant.
- 19. Opening of
- 19.1 Any specific electronic application opening procedures



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Applications

required if electronic submission of applications is permitted pursuant to Sub Clause 17.1 shall be as specified in the **PDS.** Employer shall prepare a record of the opening of applications that shall include, as a minimum, the name of the Applicant. A copy of the record shall be distributed to all Applicants.

E. Procedures for Evaluation of Applications

20. Confidentiality

- 20.1 Information relating to the evaluation of applications, and recommendation for prequalification, shall not be disclosed to Applicants or any other persons not officially concerned with such process until the notification of prequalification is made to all Applicants.
- 20.2 From the deadline for submission of applications to the time of notification of the results of the prequalification in accordance with ITA 28, any Applicant that wishes to contact the Employer on any matter related to the prequalification process, may do so but only in writing.

21. Clarification of Applications

- 21.1 To assist in the evaluation of applications, the Employer may, at its discretion, ask any Applicant for a clarification of its application which shall be submitted within a stated reasonable period of time. Any request for clarification and all clarifications shall be in writing.
- 21.2 If an Applicant does not provide clarifications of the information requested by the date and time set in the Employer's request for clarification, its application may be rejected.
- 22. Responsive-ness of Applications
- 22.1 The Employer may reject any application which is not responsive to the requirements of the prequalification document.
- 23. Domestic Bidder Price Preference
- 23.1 Unless otherwise specified in the **PDS**, a margin of preference for domestic bidders shall not apply in the bidding process resulting from this prequalification.
- 24. Sub-contractors
- 24.1 Applicants planning to subcontract any of the key activities indicated in Section III, Qualification Criteria, shall specify the activity(ies) or parts of the works to be subcontracted in the Application Submission Form. Applicants shall clearly identify the proposed specialist subcontractors in Forms ELI-1.2 and EXP (experience)-4.2(b) in Section IV. Such proposed specialist subcontractor(s) shall meet the corresponding qualification



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requirements specified in Section III, Qualification Criteria and Requirements.

24.2 At this time, the Employer does not intend to execute certain specific parts of the Works by subcontractors selected in advance by the Employer (Nominated Subcontractors) unless otherwise stated in the **PDS**.

F. Evaluation of Applications and Prequalification of Applicants

- 25. Evaluation of Applications
- 25.1 The Employer shall use the factors, methods, criteria, and requirements defined in Section III, Qualification Criteria and Requirements to evaluate the qualifications of the Applicants. The use of other methods, criteria, or requirements shall not be permitted. The Employer reserves the right to waive minor deviations in the qualification criteria if they do not materially affect the capability of an Applicant to perform the contract.
- 25.2 Only the qualifications of subcontractors that have been identified in the application may be considered in the evaluation of an Applicant. However, the general experience and financial resources of subcontractors may not be added to those of the Applicant for purposes of prequalification of the Applicant.
- 25.3 In case of multiple contracts, the Employer shall prequalify each Applicant for the maximum number and types of contracts for which the Applicant meets the appropriate aggregate requirements of such contracts, as specified in Section III, Qualification Criteria and Requirements.
- 26. Employer's
 Right to Accept
 or Reject
 Applications
- 26.1 The Employer reserves the right to accept or reject any application, and to annul the prequalification process and reject all applications at any time, without thereby incurring any liability to Applicants.
- 27. Prequalification of Applicants
- 27.1 All Applicants whose applications have met or exceeded ("passed") the specified threshold requirements will, to the exclusion of all others, be prequalified by the Employer.
- 28. Notification of Prequalification
- 28.1 Once the Employer has completed the evaluation of the applications it shall notify all Applicants in writing of the names of those applicants who have been prequalified.
- 29. Invitation to Bid
- 29.1 Promptly after the notification of the results of the pregualification the Employer shall invite bids from all the



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Applicants that have been prequalified.

- 29.2 Bidders may be required to provide a Bid Security or a Bid Securing Declaration acceptable to the Employer in the form and an amount to be specified in the Bidding Documents, and the successful Bidder shall be required to provide a Performance Security to be specified in the Bidding Documents.
- 30. Changes in Qualifications of Applicants
- 30.1 Any change in the structure or formation of an Applicant after being prequalified in accordance with ITA 27 and invited to bid shall be subject to a written approval of the Employer prior to the deadline for submission of bids. Such approval shall be denied if as a consequence of the change the Applicant no longer substantially meets the qualification criteria set forth in Section III, Qualification Criteria and Requirements, or if in the opinion of the Employer, a substantial reduction in competition may result. Any such changes shall be submitted to the Employer not later than 14 days after the date of the Invitation for Bids.



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Section II. Prequalification Data Sheet								
	A. General							
ITA 1.1	The Employer is: (CLIENT)							
ITA 1.1	The list of contracts is: Performance-based Leakage Reduction and Management Contract Contract No.: []							
ITA 1.1	ICB name and number are: []							
ITA 2.1	The name of the Borrower is: COUNTRY							
ITA 2.1	The name of the Project is: []							
ITA 4.1	(i) The parties in a JV <i>shall</i> be jointly and severally liable.(ii) Maximum number of partners in the JV shall be: <i>not limited</i>							
ITA 4.6	The electronic address of firms debarred by the Bank is: http://www.worldbank.org/debarr .							
ITA 4.7	Military or security units, or enterprises which belong to the Ministry of Defense or the Ministry of Public Security shall not be permitted to bid.							
	B. Contents of the Prequalification Document							
ITA 7.1	For clarification purposes , the Employer's address is: same as in 1.1 above. CLIENT ADDRESS							
	C. Preparation of Applications							
ITA 10.1	The language of the application as well as of all correspondence is:							
	English							



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Section II. Prequalification Data Sheet

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1	Section II. I requainteation Data Silect						
ITA 11.1 (d)	The Applicant shall submit with its application, the following additional documents: CVs of key staff						
ITA 15.2	In addition to the original, the number of copies to be submitted with the application is: four (04)						
	D. Submission of Applications						
ITA 17.1	Applicants <i>shall not</i> have the option of submitting their applications electronically.						
	For application submission purposes only , the Employer's address is:						
	Attention:						
	The deadline for application submission is:						
	Date: (notice day + 2 months)						
	Time: 12:00						
	E. Procedure for Evaluation of Applications						
ITA 23.1	A margin of preference <i>shall not</i> apply for eligible domestic bidders.						
ITA 24.2	At this time the Employer <i>does not intend</i> to execute certain specific parts of the Works by subcontractors selected in advance (Nominated Subcontractors).						



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Section III. Qualification Criteria and Requirements

This Section contains all the methods, criteria, and requirements that the Employer shall use to evaluate applications. The information to be provided in relation to each requirement and the definitions of the corresponding terms are included in the respective Application Forms.

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1 - 17 Section III. Eligibility and Qualification Criteria

目	igibility and Qu	ualification Criteria	Compliance Requirements				Documentation
					Joint Ventur	е	Submission
No.	Subject	Requirement	Single Entity	All Parties Combined	Each Partner	One Partner	Requirements
1. Eli	igibility						
1.1	Nationality	Nationality in accordance with ITA Sub-Clause 4.3.	Must meet requirement	N/A	Must meet requirement	N/A	Forms ELI –1.1 and 1.2, with attachments
1.2	Conflict of Interest	No conflicts of interest in ITA Sub-Clause 4.4.	Must meet requirement	N/A	Must meet requirement	N/A	Application Submission Form
1.3	Bank Ineligibility	Not having been declared ineligible by the Bank, as described in ITA Sub-Clause 4.6.	Must meet requirement	N/A	Must meet requirement	N/A	Application Submission Form
1.4	Government Owned Entity	Applicant required to meet conditions of ITA Sub-Clause 4.7	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Forms ELI -1.1 and 1.2, with attachments
1.5	United Nations resolution or Borrower's country law	Not having been excluded as a result of the Borrower's country laws or official regulations, or by an act of compliance with UN Security Council resolution, in accordance with ITA 4.10	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Forms ELI -1.1 and 1.2, with attachments



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1 - 18 Section III. Qualification Criteria and Requirements

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目	Eligibility and Qualification Criteria		Compliance Requirements				Documentation
	_			,	Joint Ventur	e	Submission
No.	Subject	Requirement	Single Entity	All Parties Combined	Each Partner	One Partner	Requirements
2. Hi	storical Contra	act Non-Performance					
2.1	History of Non- Performing Contracts	Non performance of a contract did not occur within the last 5 years (five years) prior to the deadline for application submission based on all information on fully settled disputes or litigation. A fully settled dispute or litigation is one that has been resolved in accordance with the Dispute Resolution Mechanism under the respective contract, and where all appeal instances available to the applicant have been exhausted.	Must meet requirement by itself or as partner to past or existing JV	N/A	Must meet requirement by itself or as partner to past or existing JV	N/A	Form CON - 2
2.2	Failure to Sign Contract	Not being under execution of a Bid Securing Declaration, pursuant to Sub Clause 4.8. for the last 5 (five) years.	Must meet requirement.	Must meet requirement	Must meet requirement	N/A	Application Submission Form
2.3	Pending Litigation	All pending litigation shall in total not represent more than 30%, (thirty percent) of the Applicant's net worth and shall be treated as resolved against the Applicant.	Must meet requirement by itself or as partner to past or existing JV	N/A	Must meet requirement by itself or as partner to past or existing JV	N/A	Form CON - 2



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Section III. Qualification Criteria

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티	igibility and G	Qualification Criteria	Com	pliance Re	quirements		Documentation
					Joint Ventur	е	Submission
No.	Subject	Requirement	Single Entity	All Parties Combined	Each Partner	One Partner	Requirements
3. Fi	nancial Situat	tion					
3.1	Financial Performance of the Applicant	Submission of audited balance sheets or if not required by the law of the applicant's country, other financial statements acceptable to the Employer, for the last 5 years to demonstrate:	Must meet requirement	N/A	Must meet requirement	N/A	Form FIN - 3.1 with attachments
		(a) the current soundness of the applicant financial position and its prospective long term profitability, and	(a) Must meet requirement	(a) N / A	(a) Must meet requirement	(a)N / A	
		(b) capacity to have a cash flow amount of US\$ 2,000,000 (US\$ two million) equivalent (liquid assets, unencumbered real assets, lines of credit and other financial means but	(b) Must meet requirement	(b) Must meet requirement	(b) N / A	(b) N/A	
		independent of any contractual advance payment). (c) Minimum average annual turnover of US\$ 10,000,000 (US\$ ten million) equivalent	(c) Must meet requirement	(c) Must meet requirement	(c) Must meet at least 20% of the requirement	(c) Lead Firm must meet at least 40% of the requirement	



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=	igibility and Q	ualification Criteria	Com	pliance Re	quirements		Documentation
					Joint Ventur	е	Submission
No. S	Subject	Requirement	Single Entity	All Parties Combined	Each Partner	One Partner	Requirements
3.2	Financial	Submission of audited balance	Must meet	N/A	N/A	N/A	Form FIN - 3.1 with
	Performance	sheets or if not required by the	requirement				attachments
	of the	law of the applicant's country, other financial statements					
	Subcontractor	acceptable to the Employer, for the last 3 years to demonstrate the minimum average annual turnover of US\$ 2,000,000 (US\$ two					



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Section III. Qualification Criteria

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Ξ	igibility and Q	ualification Criteria	Com	Documentation			
	_			,	Joint Ventur	е	Submission
No.	Subject	Requirement	Single Entity	All Parties Combined	Each Partner	One Partner	Requirements
4. Ex	perience						
4.1	Water Construction Experience	Experience under construction contracts in the water sector in COUNTRY in the role of contractor, subcontractor, or management contractor for at least the last 5 years prior to the applications submission deadline At least 2 contracts in the field of water supply construction in the past 3 years carried out with minimum value of US\$1million each	Subcontractor must meet requirement	N/A	N/A	N/A	Form EXP-4.1
4.2(a)	General Water Loss Reduction Experience	Participation as contractor, management contractor or subcontractor in at least two (2) leakage reduction contracts (covering distribution networks with a total of 50,000 service connections) in developing countries, or countries with conditions similar to COUNTRY, within the last 5 years.	Must meet requirement	Must meet requirement	N/A	N/A	Form EXP 4.2(a)



PQD - Performance-Based Leakage Reduction and Management Services

1 - 22 Section III. Qualification Criteria and Requirements

릐	igibility and Q	ualification Criteria	Com	Documentation			
				Joint Venture			Submission
No.	Subject	Requirement	Single Entity	All Parties Combined	Each Partner	One Partner	Requirements
4.2(b)	DMA Establishment and Pressure Reduction Experience	For the above or other contracts executed during the period stipulated in 4.2(a) above, Participation as contractor or consultant in at least two (2) projects that included design and establishment of DMAs and pressure reduction	Must meet requirement	N/A	N/A	Lead Firm must meet the requirement	Form EXP-4.2(b)
4.3	Availability of Key Personnel	Experienced key personnel has to be available on a long-term basis to cover the following positions and meet the respective experience requirements. Personnel included in this prequalification documents must be used in the proposal for the respective position	Must meet requirement	Must meet requirement	N/A	N/A	Form EXP-4.3
4.3(a)	Leakage Manager	 15 years experience with water distribution networks Technical University degree, for example Water and Sanitary Engineering, Civil Engineering or Mechanical Engineering 5 years of developing country experience Project Management 	Must meet requirement	Must meet requirement	N/A	N/A	Form EXP-4.3



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Section III. Qualification Criteria

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Eligibility and Qualification Criteria		Com	pliance Requirements Joint Venture			Documentation Submission	
No.	Subject	Requirement	Single Entity	All Parties Combined	Each Partner	One Partner	Requirements
		Experience 5 years experience with leakage reduction in major projects					
4.3(b)	DMA and Pressure Management Specialist(s)	5 years experience with leakage reduction projects, particularly with pressure reducing valves, controllers, data loggers and similar 2 years developing country experience	Must meet requirement	Must meet requirement	N/A	N/A	Form EXP-4.3
4.3(c)	Leak Detection Specialist(s)	 10 years hands-on leak detection experience 3 years developing country experience 	Must meet requirement	Must meet requirement	N/A	N/A	Form EXP-4.3
4.3(d)	Design Engineer/ Quality Control	 5 years experience with design of DMAs and water network installations Technical University degree, Water and Sanitary or Civil Engineering 	Must meet requirement	Must meet requirement	N/A	N/A	Form EXP-4.3



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Section IV. Application Forms

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Application Submission Form

Date: [insert day, month, year] ICB No. and title: [insert ICB number and title]

To: __[insert full name of Employer]__

We, the undersigned, apply to be prequalified for the referenced ICB and declare that:

- (a) we have examined and have no reservations to the Prequalification Documents, including Addendum(s) No(s)., issued in accordance with Instructions to Applicants (ITA) Clause 8: [insert the number and issuing date of each addendum].
- (b) we, including any subcontractors or suppliers for any part of the contract resulting from this prequalification process, have nationalities from eligible countries, in accordance with ITA Sub-Clause 4.2: [insert the nationality of the Applicant, including that of all partners in case of a Joint Venture, and the nationality of each already identified subcontractor and supplier of related services, if applicable];
- (c) we, including any subcontractors or suppliers for any part of the contract resulting from this prequalification, do not have any conflict of interest, in accordance with ITA Sub-Clause 4.4;
- (d) we, including any subcontractors or suppliers for any part of the contract resulting from this prequalification, have not been declared ineligible by the Bank, or under the Employer's country laws, official regulations, or under execution of a Bid Securing Declaration in the Employer's Country, or by an act of compliance with a decision of the United Nations Security Council, in accordance with ITA Sub-Clauses 4.6, 4.8 and 4.10;
- (e) [insert either "we are not a Government owned entity" or "we are a Government entity, and we meet the requirements of ITA Sub-Clause 4.7];
- (f) we, in accordance with ITA Sub-Clause 24.1, plan to subcontract the following key activities and/or parts of the works:
 - [insert any of the key activities identified in Section III- 4.2 (b) which the Applicant intends to subcontract]
- (g) we declare that the following commissions, gratuities, or fees have been paid or are to be paid with respect to the prequalification process, the corresponding bidding process or execution of the Contract:



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Name of	<u>Address</u>	Reason	<u>Amount</u>	
<u>Recipien</u> t				
[insert full name	[insert street/	[indicate reason]	[specify amount	
for each	number		in US\$	
occurrence]	/city/country]		equivalent]	
-				
	-		 -	

[If none has been paid or is to be paid, indicate "none".]

(h) We understand that you may cancel the prequalification process at any time and that you are neither bound to accept any application that you may receive nor to invite the prequalified applicants to bid for the contract subject of this prequalification, without incurring any liability to the Applicants, in accordance with ITA Clause 26.

Signed [insert signature(s) of an authorized representative(s) of the Applicant]

Name [insert full name of person signing the application]
In the Capacity of [insert capacity of person signing the application]

Duly authorized to sign the application for and on behalf of:

Applicant's Name [insert full name of Applicant]

Address [insert street number/town or city/country address]

Dated on [insert day number] day of [insert month], [insert year]



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Section IV. Application Forms

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Form ELI – 1.1

Applicant Information Form

Date: [insert day, month, year]
ICB No. and title: [insert ICB number and title]
Page [insert page number] of [insert total number] pages

Applicant's legal name
[insert full legal name]
In case of Joint Venture (JV), legal name of each partner:
[insert full legal name of each partner in JV]
Applicant's Actual or Intended country of constitution:
[indicate country of Constitution]
Applicant's actual or Intended year of constitution:
[indicate year of Constitution]
Applicant's legal address in country of constitution:
[insert street/ number/ town or city/ country]
Applicant's authorized representative information
Name:[insert full legal name]
Address:[insert street/number/town or city/country]
Telephone/Fax numbers: [insert telephone/fax numbers, including country and city codes]
E-mail address:[indicate e-mail address]
Attached are copies of original documents of:
Articles of Incorporation or Documents of Constitution, and documents of registration of the legal entity named above, in accordance with ITA 4.2.
☐ In case of JV, letter of intent to form JV or JV agreement, in accordance with ITA 4.1
☐ In case of Government owned entity, documents establishing legal and financial autonomy and compliance with commercial law, in accordance with ITA 4.7.



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Section IV. Application Forms

Form ELI – 1.2

Applicant's Party Information Form

[The following form shall be filled in for the Applicant's parties including partner(s) of a joint venture, subcontractors, suppliers and other parties]

Date: [insert day, month, year]
ICB No. and title: [insert ICB number and title]
Page [insert page number] of [insert total number] pages

JV applicant legal name:
[insert full legal name]
Applicant's Party legal name:
[insert full legal name of Applicant's Party]
Applicant's Party country of registration:
[indicate country of registration]
Applicant Party's year of constitution:
[indicate year of constitution]
Applicant Party's legal address in country of constitution:
[insert street/ number/ town or city/ country]
Applicant Party's authorized representative information
Name:[insert full legal name]
Address:[insert street/ number/ town or city/ country]
Telephone/Fax numbers: [insert telephone/fax numbers, including country and city
[codes]
E-mail address: [indicate e-mail address]
Attached are copies of original documents of:
Articles of Incorporation or Documents of Constitution, and Registration Documents of the legal entity named above, in accordance with ITA 4.2.
☐ In case of a Government owned entity, documents establishing legal and financial autonomy and compliance with commercial law, in accordance with ITA 4.7.



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Section IV. Application Forms

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Form CON - 2

Historical Contract Non-Performance

[The following table shall be filled in for the Applicant and for each partner of a Joint Venture]

Applicant's Legal Name: [insert full name]
Date: [insert day, month, year]
Joint Venture Party Legal Name: [insert full name]
ICB No. and title: [insert ICB number and title]
Page [insert page number] of [insert total number] pages

Non-Performing Contracts in accordance with Section III, Qualification Criteria and Requirements						
 □ Contract non-performance did not occur during the [number] years specified in Section III, Qualification Criteria and Requirements, Sub-Factor 2.1. □ Contract(s) not performed during the [number] years specified in Section III, Qualification Criteria and Requirements, requirement 2.1 						
Year	Non	Contract Identification	Total			
	performed		Contract			
	portion of		Amount			
	contract		(current			
			value, US\$			
			equivalent)			
[insert	[insert	Contract Identification: [indicate complete	[insert			
year]	amount and	contract name/ number, and any other	amount]			
,	percentage]	identification]	-			
		Name of Employer: [insert full name]				
		Address of Employer: [insert street/city/country]				
		Reason(s) for non performance: [indicate main				
		reason(s)]				
Pending Litigation, in accordance with Section III, Qualification Criteria and Requirements						
□ □ No pending litigation in accordance with Section III, Qualification Criteria and Requirements, Sub-Factor 2.2						
-						
Requirements, Sub-Factor 2.2 as indicated below.						



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			11
Year	Outcome as		Total
	Percent of	Contract Identification	Contract
	Total Assets		Amount
			(current
			value, US\$
			equivalent)
[insert	[insert	Contract Identification: [indicate complete	[insert
year]	percentage]	contract name, number, and any other	amount]
		identification]	
		Name of Employer: [insert full name]	
		Address of Employer: [insert street/city/country]	
		Matter in dispute: [indicate main issues in	
		dispute]	
		Contract Identification:	
		Name of Employer:	
		Address of Employer:	
		Matter in dispute:	



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Form FIN – 3.1

Financial Situation

[The following table shall be filled in for the Applicant, for each partner of a Joint Venture and for the Subcontractor]

Legal Name: [insert full name]
Date: [insert day, month, year]
Applicant's Party Legal Name: [insert full name]
ICB No. and title: [insert ICB number and title]
Page [insert page number] of [insert total number] pages

1. Financial data

Financial information in (US\$ equivalent in 000s)	Historic information for previous _[insert number] years,						
	Year 1	Year 2	Year 3	Year	Year n		
Information from Balance Sheet							
Total Assets (TA)							
Total Liabilities (TL)							
Net Worth (NW)							
Current Assets (CA)							
Current Liabilities (CL)							
Information from Income Statement							
Total Revenue (TR)							
Profits Before Taxes (PBT)							



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2. Financial documents

The Applicant and its parties shall provide copies of the balance sheets and/or financial statements for [number] years pursuant Section III, Qualifications Criteria and Requirements, Sub-factor 3.1. The financial statements shall:

- a) reflect the financial situation of the Applicant or partner to a JV, and not sister or parent companies.
- b) be audited by a certified accountant.
- c) be complete, including all notes to the financial statements.
- d) correspond to accounting periods already completed and audited (no statements for partial periods shall be requested or accepted).

Attached are copies of financial statements (balance sheets, including all related notes, and income statements) for the *[number]* years required above; and complying with the requirements



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Section IV. Application Forms

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Form EXP – 4.1

Water Construction Experience

[The following table shall be filled in for the Subcontractor]

Subcontractor's legal name: [insert full name]

Date: [insert day, month, year]

Applicant JV Party Legal Name: [insert full name]

ICB No. and title: [insert ICB number]

Page [insert page number] of [insert total number] pages

[Identify contracts in the water sector in COUNTRY that demonstrate continuous construction work over the past [number] years pursuant to Section III, Qualification Criteria and Requirements, Sub-Factor 4.1.List contracts chronologically, according to their commencement (starting) dates.]

Starting Month /	Ending Month /	Contract Identification	Role of the Subcontractor
Year	Year		Subcontractor
[indicate month/year]	[indicate month/ year]	Contract name: [insert full name] Brief Description of the Works performed by the Applicant: [describe works performed briefly]	[insert "Contractor," or "Subcontractor;
		Amount of contract: [insert amount in US\$ equivalent] Name of Employer: [indicate full name] Address: [indicate street/number/town or city/country address]	" or" Contract Manager"] ———
		Contract name: Brief Description of the Works performed by the Applicant: Amount of contract: Name of Employer: Address:	
		Contract name: Brief Description of the Works performed by the Applicant: Amount of contract: Name of Employer: Address:	
		Contract name: Brief Description of the Works performed by the Applicant: Amount of contract: Name of Employer: Address:	



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Starting Month / Year	Ending Month / Year	Contract Identification	Role of the Subcontractor
		Contract name: Brief Description of the Works performed by the Applicant: Amount of contract: Name of Employer: Address:	





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Form EXP – 4.2(a)

General Water Loss Reduction Experience

[The following table shall be filled in for contracts performed by the Applicant and/or partners of a Joint Venture]

Applicant's/Joint Venture Partner's Legal Name: [insert full name]

Date: [insert day, month, year]

JV Party Name: [insert full name]

ICB No. and title: [insert ICB number and title]

Page [insert page number] of [insert total number] pages

General Water Loss Reduction Experience Contract No[insert number] of [insert number of similar contracts required]		Information	
Contract Identification	_[insert contro applicable]_	act name and	number, if
Award date	_[insert day, mo	nth, year, i.e., 15 J	une, 2015]_
Completion date	_[insert day, month, year, i.e., 03 October, 2017]_		
Role in Contract [check the appropriate box]	Contractor	Management Contractor	Subcontracto r
Total Contract Amount	[insert total contract amount in local currency]		US\$[insert total contract amount in US\$ equivalent]



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			-FF
General Water Loss Reduction Experience Contract No[insert number] of [insert number of similar contracts required]		Information	
If partner in a JV, or subcontractor, specify participation in total contract amount	[insert a percentage amount] ——	[insert total contract amount in local currency]	[insert total contract amount in US\$ equivalent]
Employer's Name:	[insert full nam	e]	
Address: Telephone/fax number	[indicate street / number / town or city / country] [insert telephone/fax numbers, including country and city area codes]		
E-mail:	[insert e-mail addr	ress, if available]	



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Form EXP -4.2(b)

DMA Establishment and Pressure Reduction Experience

[The following table shall be filled in for contracts performed by the Applicant and/or partners of a Joint Venture]

Applicant's/Joint Venture Partner's Legal Name: [insert full name]

Date: [insert day, month, year]

JV Party Name: [insert full name]

ICB No. and title: [insert ICB number and title]

Page [insert page number] of [insert total number] pages

		Information	
Contract Identification	_[insert contract name and number, if applicable]_		
Award date	_[insert day, mon	th, year, i.e., 15 .	Iune, 2015]_
Completion date	_[insert day, month, year, i.e., 03 October, 2017]_		
Role in Contract [check the appropriate box]	Contractor	Management Contractor	Subcontractor
Total Contract Amount	[insert total contract amount in local currency]		US\$[insert total contract amount in US\$ equivalent]
If party in a JV, specify participation of total contract amount	[insert a percentage amount] ——	[insert total contract amount in local currency]	[insert total contract amount in US\$ equivalent]



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	Information	
Employer's Name:	[insert full name]	
Address:	[indicate street / number / town or city / country]	
Telephone/fax number	[insert telephone/fax numbers, including country and city area codes]	
E-mail:	[insert e-mail address, if available]	





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Form EXP – 4.3

Format of Curriculum Vitae (CV) for Key Personnel

[The following table shall be filled in for contracts performed by the Applicant and/or partners of a Joint Venture, and specialist sub contractors]

Applicant's/Joint Venture Partner's Legal Name: [insert full name]

Date: [insert day, month, year]

JV Party Name: [insert full name] ICB No. and title: [insert ICB number and title] Page [insert page number] of [insert total number] pages Proposed Position: ____ Name of Firm: Name of Staff: Profession: Date of Birth: ____ Years with Firm/Entity: _____ Nationality: Membership in Professional Societies: Detailed Tasks Assigned: **Key Qualifications:** [Give an outline of staff member's experience and training most pertinent to tasks on assignment. Describe degree of responsibility held by staff member on relevant previous assignments and give dates and locations. *Use about half a page.*] **Education:** [Summarize college/university and other specialized education of staff member, giving names of schools, dates attended, and degrees obtained. Use about one quarter of a page.]



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Employment Record:	
[Starting with present position, list in reverse order ever member since graduation, giving dates, names of emp locations of assignments. For experience in last ten year references, where appropriate. Use about two pages.]	loying organizations, titles of positions held, and
Languages:	
[For each language indicate proficiency: excellent, good,	fair, or poor in speaking, reading, and writing.]
Certification:	
I, the undersigned, certify that to the best of my knowled qualifications, and my experience.	ge and belief, these data correctly describe me, my
	Date:
[Signature of staff member and authorized representative	
Full name of staff member:	
Full name of authorized representative:	



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Section V. Eligible Countries

Eligibility for the Provision of Goods, Works and Services in Bank-Financed Procurement

- 1. In accordance with Para 1.8 of the Guidelines: Procurement under IBRD Loans and IDA Credits, dated May 2004, the Bank permits firms and individuals from all countries to offer goods, works and services for Bank-financed projects. As an exception, firms of a Country or goods manufactured in a Country may be excluded if:
 - Para 1.8(a)(i): as a matter of law or official regulation, the Borrower's Country prohibits commercial relations with that Country, provided that the Bank is satisfied that such exclusion does not preclude effective competition for the supply of the Goods or Works required, or
 - Para 1.8(a)(ii): by an Act of Compliance with a Decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, the Borrower's Country prohibits any import of goods from that Country or any payments to persons or entities in that Country.
- 2. For the information of borrowers and bidders, at the present time firms, goods and services from the following countries are excluded from this bidding:
 - (a) With reference to paragraph 1.8 (a)(i) of the Guidelines:

No countries as of March 2006

(b) With reference to paragraph 1.8 (a)(ii) of the Guidelines:

No countries as of March 2006



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Scope of Works 2 - 1

PART 2 – Works Requirements



PQD - Performance-Based Leakage Reduction and Management Services

Scope of Works

2 - 2

Section VI. Scope of Works

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PQD - Performance-Based Leakage Reduction and Management Services

Scope of Works 2 - 3

1 Preface

The contract covers an **array of activities needed to reduce and, thereafter, maintain leakage levels**, including many activities related to the management and periodic evaluation of DMA data. It further includes carrying out **DMA Establishment Works** that form the basis for performance based leakage reduction, **System Expansion Works** that might become necessary because of new customers applying for connections as well as a provision for **Emergency Works and Unforeseen Works**. This preface summarizes the concept of the Performance-Based Leakage Reduction and Management component of the contract.

Performance-based contracting for Leakage Reduction and Management is a new concept designed to increase the efficiency and effectiveness of water distribution networks and related operations. It should ensure that the leakage will be significantly reduced and the reduced leakage levels will be maintained over the entire period of the contract which is normally several years. This type of contract significantly expands the role of the private sector, from the simple execution of works to the management and conservation of water distribution networks.

In **traditional leakage reduction contracts**, the Contractor is responsible to carry out leak detection surveys and is paid for example per length of pipeline surveyed or per staff day. While this modality often brings improvement over the "do nothing" scenario, the results are in many cases still less-than-optimal. The problem is that the Contractor has the wrong (or no) incentive and no obligation whatsoever to achieve maximum savings. And since repairs are traditionally carried out by a third party, the leakage reduction Contractor is not properly accountable and the results are sometimes not satisfactory.

The **Performance-Based Leakage Reduction and Management Contract** tries to address the issue of inadequate incentives. During the bidding process, Contractors compete among each other by proposing a (relatively small) fixed quarterly lump-sum fee and a (substantial) performance fee per volume of water saved. It is important to understand that Contractors are not paid directly for "inputs" or physical works (which they will undoubtedly have to carry out), but for the "output,": volume of leakage reduced. The quarterly lump-sum remuneration and the performance fee paid to the Contractor will cover all physical and non-physical works and services and all materials provided by the Contractor, except for system expansion works and unforeseen emergency works which would be remunerated separately. The DMA Establishment Works which have been explicitly specified by the Employer in the contract would be quoted on the basis of measurable output quantities and paid as performed. One fundamental feature of the performance-based contract is that the Contractor is responsible for designing and carrying out the actions he believes are necessary in order to comply with the contract. Under the performance-based contract, the Contractor has a strong financial incentive to be efficient.



PQD - Performance-Based Leakage Reduction and Management Services

Scope of Works 2 - 4

In order to maximize profits, he must reduce his activities to the smallest possible volume of intelligently designed interventions, which nevertheless ensure that pre-defined outputs are achieved and maintained over time. This type of contract makes it necessary for the Contactor to have a good management capacity. Here, "management" means the capability to define, optimize and carry out in a timely basis the physical interventions which are needed in the short, medium and long term, in order to guarantee that the leakage reduction will be done as efficiently as possible.

Reducing and managing leakage includes routine and periodic tasks. It is expected that the use of private specialized firms under performance-based contracts will unleash significant efficiency gains, and stimulate innovation in comparison with traditional water utility practices.

Under the terms of the contract, the Contractor will also be responsible for the continuous monitoring and control of leakage levels of all DMAs included in the contract. This will not only be necessary to fulfill the contract requirements, but it is an activity which will provide him with the information needed in order to be able (i) to know the degree of his own compliance with the contract and the achieved savings, and (ii) to define and plan, in a timely fashion, all physical interventions required to assure that leakage levels never increase over the contractual limits. Under the performance-based contract modality, the Contractor will not receive instructions from the Employer concerning the type and volume of works to be carried out. Instead, all initiative is given to the Contractor who should do whatever is necessary and efficient to achieve the leakage reduction levels required. This concept is expected to lead not only to significant efficiency gains, as mentioned earlier, but also to technological innovation.

The beneficiaries of the new concept are expected to be the customers, the water supply company, and the Contractors or other private sector enterprises. In a wider sense, future generations will be able to benefit from a better preservation of past investments in the water distribution network. Customers will be able to know the service level they will get for their water tariff. The Water Utility should benefit from the cost-efficient water loss reduction and will be able to sell the saved volume of water to existing or new customers. For Contractors and other private sector enterprises, the new type of contracts should open up new business opportunities, in which longer contract periods provide a more stable business environment. But it may be the future generations who will perhaps benefit most, since they will not have to pay for excessive capacity of new water production facilities which would be required to pump more and more water in the leaky distribution system.

Bidders will present their financial offer for: (i) the DMA Establishment Works (if so required in the bidding data), using a BoQ in the form of a "priced activity schedule"; (ii) the core element of the contract, the leakage reduction and management services in the form of a quarterly fixed-fee and a volumetric performance fee; (iii) unit prices for system expansion works; as well as (iv) unit prices and a daywork schedule for emergency and unforeseen works.



PQD - Performance-Based Leakage Reduction and Management Services

Scope of Works 2 - 5

2 Basic Concept

The main objective of this contract is to reduce leakage in the contract area in an efficient and sustainable way. The main contract element therefore is "Leakage Reduction and Management Services" which will largely be paid on a performance basis. Payments for this element include all activities, services, equipment, civil and installation works as well as the supply of all materials required to achieve the contract objective.

The other elements of the contract are the (i) initial establishment of District Meter Areas ("DMA Establishment Works"), (ii) the installation of new connections for new customers inside the contract area ("System Expansion Works") and provisions for (iii) "Emergency and Unforeseen Works" (for example the repair of leaks on trunk mains outside the contract area.

DMAs shall be established in accordance with the approved Basic Design (the DMA outline plan) which forms part of this contract but detailed design shall be done by the Contractor and has to be based on detailed investigations (since there might be discrepancies between the situation shown on the DMA outline plan and the actual network configuration). As soon as a DMA is established, a baseline inflow and pressure measurement shall be carried out which will later be used to calculate the leakage reduction performance. After leakage in a DMA has been reduced and initial leakage reduction works are completed, the level of leakage in the DMA must be maintained until the end of the contract not exceeding limits described in Part C of the Contract Specifications.

The contract duration is [] years, with a first phase of [] years for the actual leakage reduction activities (the **Leakage Reduction Phase**) and a [1] year **Maintenance Period** in which the level of savings has to be maintained and a [1] year **Defect Liability Period**.

3 Contract Elements

3.1 **DMA Establishment Works**

The Contractor shall establish around [] DMAs. The scope of work per DMA includes:

- ➤ detailed site investigation and updating of the distribution network drawing;
- > verification of suggested DMA boundaries;
- ➤ detailed DMA design, including: connecting mains to be laid, boundaries valves, inflow measurement chamber, pressure reducing valve arrangement and specifications just to mention the most important activities; detailed design shall be submitted for approval;
- ➤ execution of all required civil and installation works, complete with the supply of all required pipes, materials, fittings and equipment as per the specifications;



PQD - Performance-Based Leakage Reduction and Management Services

Scope of Works 2 - 6

- installation of pressure and flow data logger, setting up of data transfer to Contractor's office and Client's office (GSM data transfer);
- > execution of zero-pressure-test; and
- preparation of as-built drawings.

After the successful execution of the above the actual leakage reduction activities in the DMA can start.

3.2 Leakage Reduction and Management Services

Leakage Reduction and Management Services are the core element of this contract. The Contractor has to take all necessary action, provide all required services and materials and carry out all works required to achieve the objective of the contract and reduce leakage in the contract area. The following (non-exhaustive) list summarizes the activities the Contractor is normally expected to carry out:

- ➤ baseline 7-day inflow and pressure measurement prior to starting any activities;
- ➤ leak detection surveys (using all kind of equipment and technologies, from simple sounding with a listening stick to leak noise correlators and leak noise loggers as appropriate);
- ➤ pressure management: stabilizing, managing and reducing average DMA pressure using PRVs and controllers and various techniques as appropriate;
- leak repair: repair of leaks on mains and replacement of leaking service connections;
- ➤ final 7-day inflow and pressure measurement after the leakage reduction activities have been successful concluded; and
- rightharpoonup continuous monitoring of DMA inflow, pressure and minimum night flow and execution of leak detection and repair should the tolerance limits be exceeded (see Part C.5 of the Contract Specifications).
- illegal connections shall be detected and reported to the Employer.

3.3 System Expansion Works

System Expansion Works include the installation of service connections to new customers inside the DMA. In some cases this might also require the extension of a distribution main inside the DMA so that new customers can be connected in the most effective way.



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3.4 Emergency and Unforeseen Works

The contract offers a provision for Emergency and Unforeseen Works. These would typically include (non-exhaustive list):

- ➤ leak repairs on trunk mains and distribution mains close to but outside of the DMAs included in this contract
- > valve repair, replacement or installation in new location on trunk and distribution mains outside of the DMAs
- > repair or installation of fire hydrants
- > replacement of distribution mains and associated service connections inside the DMAs

Should the Contractor see advantages of replacing a distribution main within a DMA, for example if the burst frequency is too high and frequent leak repairs are not sufficient to achieve sustainable leakage reduction in a DMA, the Contractor may suggest the replacement of such pipeline. Should a pipeline be replaced in a DMA, leakage reduction achieved as a result of the replacement will not be eligible for the m3 performance payment and therefore leakage assessment measurements for the DMA have to be carried out before and after pipeline replacement.

3.5 Transfer of Technology

During the Maintenance Period the Contractor shall train the Employers staff and transfer all technology in order to enable them to take over DMA management, maintenance of pressure reducing valves, leak detection scheduling and execution, leak repair management and all other activities required to manage the DMA system and maintain the reduced leakage levels.

As part of the transfer of technology activities the Contractor shall jointly with the Employers staff develop a medium term asset management strategy that is based on the findings and experience made during the duration of the contract. Strategy development shall based on updated maps and pipe condition information, detailed burst records and all other information the contractor has collected in the course of the project. All this detailed background information shall be submitted to the Employer, either as part of the continuous reporting or, any additional information, together with the asset management strategy.



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4 Reporting

Each quarterly statement of the Contractor shall be accompanied with a progress report, comprising of the standard tables explained above, a summary of all works carried out during the last quarter, a work program for the quarter ahead and all other information that might be requested by the Project Manager. The form of the quarterly report is to be agreed with the Project Manager.

At the end of the Maintenance Period the Contractor shall submit a Project Completion Report that provides the following information:

- > final performance fee calculations
- summary tables of system expansion and unforeseen works
- > summary tables of number and types of leaks detected and repaired
- updated distribution network drawings (both hardcopy and AutoCAD files) of all DMAs
- > as-built drawings for all main pipes installed and chambers constructed
- > table with target and intervention minimum night flow for all DMAs
- > DMA data management guidelines
- pressure management guidelines that include maintenance recommendations and (if any) specific information for each PRV
- > descriptive summary of works carried out and problems encountered
- > the medium term asset management strategy for the contract area
- recommendations for possible future water loss reduction contracts in CLIENT

5 Hydraulic Modeling

A hydraulic model [DATED] is available with the Employer. Should the Contractor need to hydraulically simulate network changes or the influence of DMA boundaries, hydraulic simulations shall be done by the Contractor jointly with the Project Manager.



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6 Minimum Key-Personnel Requirements

In general, staffing levels and qualifications are to be decided by the Contractor. However, in order to make bids comparable, the following minimum number of experienced keypersonnel has to be available. The number of man-months for each position is to be understood as the absolute minimum requirement. Evidence of the physical presence of these staff members have to be provided in the quarterly progress reports. It has to be understood that it might be necessary to bring significantly more specialists to the site in order to achieve the objectives of the contract. All cost of such additional personnel has to be included in the contract price.

Position	Minimum Experience Requirements	Minimum number of man- months
Leakage Manager	 15 years experience with water distribution networks Technical University degree, for example Water and Sanitary Engineering, Civil Engineering or Mechanical Engineering 5 years of developing country experience Project Management experience 5 years experience with leakage reduction in major projects 	[50]
DMA and Pressure Management Specialist(s)	 5 years experience with leakage reduction projects, particularly with pressure reducing valves, controllers, data loggers and similar 2 years developing country experience 	Total of [60]
Leak Detection Specialist(s)	 10 years hands-on leak detection experience 3 years developing country experience 	Total of [60]
Design Engineer/Quality Control	 5 years experience with design of DMAs and water network installations Technical University degree, Water and Sanitary or Civil Engineering 	[12]

