**Self-Optimizing 24/7 Distribution Improvement Contract**

**Terms of Reference: Explanatory Note**

This TOR is one of four designed to produce innovative types of NRW Reduction Contracts. The TORs are designed to be used as part of an NRW-reduction project being implemented in accordance with the NRW Manual.[[1]](#footnote-2) It is assumed that the consultant will be engaged after an Initial Assessment (and if needed, a Field Assessment) of the utility and relevant networks have been completed (see Section 5 of the Manual). That assessment will have gathered information on the Water Balance, assessed whether NRW control is needed, whether a performance-based contract is appropriate, and what the goal of the contract should be.

Various types of contracts could be developed. Four are listed in Appendix B of the Manual and are described briefly below. Terms of Reference for development of each type of contract have been developed.

1. **DBOM (Physical Loss Reduction) Contract**—these contracts are focused on reducing physical losses. They provide high levels of incentive and risk transfer by making the contractor responsible for all costs, with payment dependent on the volume of loss reduction achieved. They also require construction of DMAs and other physical infrastructure. They can be considered the NRW-reduction equivalent of a Design-Build-Operate-Maintain contract for water production and treatment. This contract type has several variants. The differences between the variants mostly concern the degree of risk transfer to the contractor, and the specificity with which network rehabilitation and remodeling requirements.
2. **24/7 Self-Optimizing Contract (SO24/7)**—this innovative model provides the contractor with incentives based on the value to the utility of key outputs—including customers moved to 24/7 supply, and revenue collected—as well as inputs, such as bulk water used. This design provides for considerable flexibility, and reduces the amount of upfront engineering work required in contract preparation. So long as the utility is able to value the outputs it wants to achieve, the design of the works adapted by the contractor as it gains more information.
3. **Cost-Plus (for use in Competitive Discovery) Contract—**this contract type simply pays the contractor for work done on NRW-reduction at actual cost plus a margin. Actual costs are disclosed though an agreed ‘open book’ process that allows the utility to see the costs the contractor incurred. The ‘plus’ component would be a standard profit element on top of costs, typically less than 10 percent. Modest incentive payments for improvement in specified key performance indicators can also be included. The cost-plus contract is quick to implement, but typically does not maximize good value for money.
4. **Incentivized Program Management Contract**—Program management contracts separate the ‘brains’ of the operation (planning interventions such as DMAs and action leak control) from the ‘brawn’ of implementing the works. A program management contract is a professional services contract, in which the utility is paying for a team of experts to design, procure, and supervise NRW-reduction works. Actual implementation is done by third-party works contractors. The program manager is paid a program management fee—typically around 10 percent of the value of the works—and is also incentivized with performance pay for improvements on specified key performance indicators.

## Situations and Reasons to use the SO24/7 TOR

The SO24/7 TOR is for engaging a consultant to develop the contract type known as 24/7 Self-Optimizing Contract. This contract would be selected in conditions where:

1. There is intermittent water supply
2. It appears that, with reasonable levels of physical loss control, 24/7 supply could be achieved with existing production capacity (or with existing capacity plus additional capacity expected to come on in the near term).

This contract type aims to give the contractor incentives to create a program that delivers best value for the client utility—as opposed to more traditional contracts in which the program of work is specified by consultants, and then incorporated in the contract. The advantages are threefold:

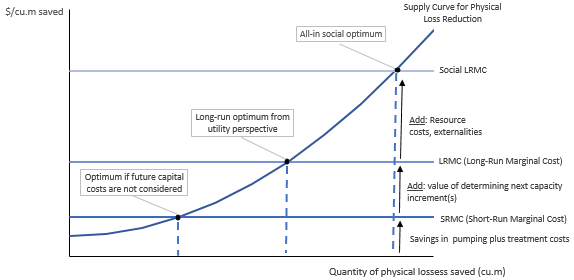
1. **Information** about the costs of physical and commercial loss reduction emerge during the course of the NRW control program. This information is simply not available at the time the contract is designed. As a result, it is not possible for a contract to specify—prior to the work starting—what the optimal program of work would be (see Discussion Paper 4 p.9-10)
2. **Incentives & Abilities:** PBCs aim to engage skilled NRW reduction experts and incentivize them with financial rewards to achieve results that are in the public interest. Where the program of works is specified in some detail, the incentives and expertize are brought to bear on the execution of the plan, but not on the plan itself. This is a limitation, because there may be as much or more value in deciding ‘what are the right things to do’ (planning) in ‘doing things right’ (execution). The ‘self-optimizing’ contract aims to create incentives to plan an optimal program of works—incentives that a consultant hired to design such a program does not have
3. **Speed:** detailed investigation of the network prior to designing a contact has been the common in developing NRW PBCs in the past. Sometimes consultants spend a year or more analyzing the network so that they can design a suitable NRW-reduction program for incorporation in the contract.

By creating a contract in which the contractor designs the program of works as it thinks best and adapts that program in response to emerging information, it should be possible to reduce up-front preparation time and engage a contractor to deliver results more quickly.

## Value-Based Approach

The essence of the ‘self-optimizing’ contract is to specify financial values, not physical quantities. As Figure 1.1 illustrates, the optimum quantity of NRW-reduction occurs where the marginal cost of reducing physical losses equals the marginal benefit. The marginal benefit is taken to be at least the long-run marginal cost (LRMC)—that is the variable operating costs plus incremental capital cost of new production which would be awarded through loss reduction.

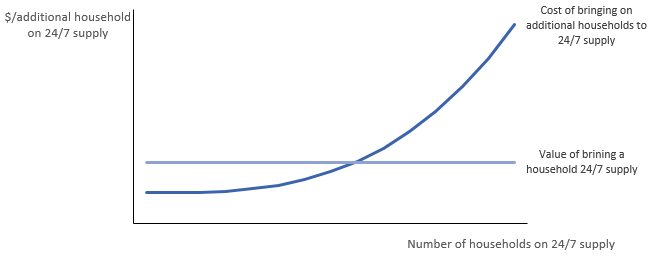
Figure .: Various Benefits of Physical Loss Reduction Create Various Optima



Source: Discussion Paper 3 Section 2

In conditions of intermittent supply, given the trade-off between hours of supply and physical losses (see Discussion Paper 3 Section 3) Figure 1.2 can be transformed into an optimal number of connections to be brought onto 24/7 using NRW-reduction.

Figure .: Optimizing Physical Loss Reduction for Service Improvement



Source: Discussion Paper 3 Section 3

In this diagram, the value of bringing a household onto 24/7 should be the lower of

* Economic benefit to the household (health benefits, time saved, reduced coping costs); and
* The cost of providing 24/7 through expansion in production of water.

By designing the contract around values of outputs and costs of inputs, the information needed may be reduced and incentives for optimizing program design created.

One of the key challenges in designing this contract is making sure that the benefits accrue to the utility and the public, not the contractor. A very simple contract might achieve the optimal (welfare maximizing) outcome by simply paying the contractor the value of 24/7 supply for each customer brought onto 24/7. However, this would be an expensive contract for the utility and immensely profitable for the contractor.

The consultant needs to design a contract that captures as much of the benefits as possible for the public. Ideas on how to capture those benefits are presented in Section 4 of Discussion Paper 3. One option is to have contractors bid a payment (or rebate) to the utility as the bid factor. Another is to offer a price per connection on 24/7 that increases as more connections are added (as illustrated in Figure 1.2 above).

## Process for Using This TOR

This TOR is designed to be used by a TTL at Phase 6 of the Manual. It covers the work of both Phase 6 and Phase 7.

**Self-Optimizing 24/7 Distribution Improvement Contract**

**Terms of Reference DRAFT**

**Project/Assignment Title: Country Support: Preparation of ‘Performance-Based, Self-Optimizing 24/7 Contract’ for [utility/town]**

**Task Team Leader: <XXXX>**

**Manager: <XXXX>**

**Department/Division: GWADR (Water Global Practice)**

**Location: Washington DC**

**Appointment Type: Firm**

**Date of Assignment: <XXXX>**

**International Recruitment: x yes 🞏 no**

**A. Background and Objectives**

**Country, Municipality, Utility**

*[In this section a description on country, municipality and utility background should be described by the TTL.]*

**Objective of this Assignment**

The objective of this assignment is to develop a Performance Based Contract of the type that the Manual[[2]](#footnote-3) describes as a performance-based self-optimizing 24/7 (SO247) contract. The aim of this contract will be to engage a specialized firm, on a performance-based contract, to design and implement a distribution network improvement program that, by controlling losses, has the effect of increasing to an optimal level the number of customers receiving reliable supply of water 24 hours a day, 7 days a week with the current (or planned) volumetric supply.

**Previous work**

This assignment builds on work already done to investigate the suitability of a Performance Based Contract for NRW reduction as a way to achieve the goals of the utility. In particular, *[describe here the findings of the Initial Assessment and (if one was done) the Field Assessment. These reports will be provided to the shortlisted consultants. Describe any other preparatory work done]*

**Related work**

*[If the NRW PBC is part of a larger investment or reform project, describe here the other components of the project. Mention useful reports and other documents, and say that they will be made available to the shortlisted consultants.]*

**Supported by a Global Program**

This project supported by a World Bank Program designed to catalyze increasingly good PBCs for NRW Management. Better practices are identified in the short term as faster and more cost-effective preparation of PBC transactions and increased number of market participants (suppliers and seekers) active in the market, and in the medium-to-long term by improved efficiency of NRW-Reduction Programs supported by donors (including better value-for-money of PBC activities in NRW management and better sustainability of NRW performance improvements in participating utilities after a PBC has been completed. [For more information on the global program, go to insert reference to website or resource link if applicable]

**Relationship to NRW-reduction Contracts**

The self-optimizing 24/7 contract is not termed an NRW-reduction contract because by expanding hours of service, total daily physical losses may remain constant or even increase (although losses per hour of pressurization would decrease). However, the main objective of the contract is to control physical losses so that continuous supply may be achieved with a specified system input volume. In some cases, loss reduction may be possible and desirable after 24/7 supply has been achieved.

# B. SCOPE OF WORK

# Phase 1: Analyze Feasibility, Benefits, and Costs

## Situation Report

The Consultant shall assess the existing situation, using available data. So for as possible, the consultant should rely on the Assessment Report provided. However, the consultant may need to add information and at a minimum, confirm that it is still current and that objectives are clear and agreed. The consultant will provide a report on the objectives and context for the proposed projects, as well as an updated workplan and methodology to the extent necessary.

Note: the idea here is to record all relevant information in one place and ensure it is all agreed. Only limited research should be required.

**Output**

The output will be an Existing Situation Report covering the following items.

* **Objectives**. What has been agreed to so far that the SO247 Contract (together with any associated measures), will seek to achieve.
* **Areas**. A description of the service area of the utility (Utility Service Area) and a description of the area of the network expected to be covered by the contract (Contract Area)
* **Institutional and Regulatory**. This shall include a summary of the corporate form, governance, accountability, regulatory and incentive arrangement that apply to the utility, highlighting points that are relevant to the design of a SO247 contract.
* **Service Levels**. Description of Service Levels currently received by customers in the Utility Service Area and Contract Area, so far as this can be ascertained from currently available or easily collected data. If data is not available, this should be noted, and estimates based on expert judgement used. These Service Levels are to include:
  + Continuity of supply;
  + Reliability of supply;
  + Pressure at customer premises;
  + Chemical and bacteriological parameters of water being received by customers, and comparison with drinking water standards, as well as
  + Description of the systems and methods used to assess Service Levels.
* **System Input Volumes** to the Utility Service Area and the Contract Area, so far as this can be ascertained from currently available or easily collected data. It shall also describe the equipment and procedures used to measure these System Input Volumes currently
* **Water Balance**. A Water Balance filled out in WB Easy Calc or a similar system, using information already available from the Assessment and with the utility—that is, without field measurement by the consultant. Where this was done in the Assessment Phase, it will be supplied to the consultant
* **Supply and Demand Forecasts**. Forecasts, to the extent that they are available from existing sources, of:
  + Water Demand in the Areas (i.e. both the Utility Service Area and the Contract Area)
  + Proposed network extensions in the Areas
  + System input availability in the Areas—this should include increases in input \_\_\_\_ expected from rehabilitation or construction of production facilities
  + The cost of securing additional System Input Volumes, both capital and operating.
* **Financial performance**. Profitability, cashflow, and balance sheet for at least the last three years shall be included, and levels and trends in financial performance relevant to the design of the SO247 Contract shall be summarized and commented on
* **Refined approach to estimating costs and benefits**. The report shall include a refined approach to measuring costs and benefit of increases in number of customers on 24/7 supply. (This should draw on the ideas in Discussion Paper 3 Section 3.) This refined approach shall be agreed with the client before proceeding
* **Revised workplan and methodology**. This shall describe any changes proposed to the methodology and workplan.

## Estimate Benefits

Note: The idea here is to estimate, in a cost effective and quick way, the value to be placed on each of the benefits the contract is intended to deliver.

The consultant shall agree with the client the benefits that PBC is intended to deliver to the utility and the public and shall estimate the value of each benefit in economic terms, using a robust and cost-effective approach.

The valuation methodology shall be set out in the proposal, and refined in the Existing Situation Report, and agreed with the client before being used.

Typical intended benefits, and valuation methods are shown in the Box below, as a guide.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Box: Valuation Methods   |  |  |  | | --- | --- | --- | | **Benefit** | **Unit** | **Possible Valuation Method** | | Increase in number of customers receiving 24/7 service | $ benefit per customer per year | This value should be the lower of the value to the customer of the better service and the cost of providing 24/7 service another way (alternative approach)  Benefit to customer may be established through contingent valuation methodology, or other methods such as estimating value of reduction in coping and health costs from intermittent supply  Cost of alternative may be estimated from the Long Run Average Incremental Cost of additional water supply that would be required to achieve 24/7 supply for customers at current levels of physical losses  If 24/7 supply is a regulated service standard, it may be acceptable to just use the cost of alternative approach.[[3]](#footnote-4) | | Increase in pressure to standard levels | $ benefit per customer per year | Analogous to above method | | Increase in revenue | $ / period | Each dollar should be valued at $1 \* expected probability of collection | | Increase in collection rate | $ / period | Increase in $ collected for given level of revenue | |

Benefits report

The consultant shall deliver a Benefits Report which, for each benefit:

* Describes the intended benefit
* Provide an estimate of the value of the benefit
* Describes how that estimate was derived
* Explains any weaknesses in the estimation approach, and hence likely biases and confidence intervals around the estimates

It is acceptable for the estimates to be presented as ranges, with any bias indicated, provided that the methodology used was reasonable, and agreed with the client, accuracy levels and biases are clearly explained, and the consultant explains how the contract can be designed in a way which is robust to biases and uncertainties in the estimates.

## Estimate Costs

The consultant shall estimate an indicative cost of achieving the intended benefits. These costs shall include the costs of capital works on the network, increased operating and maintenance costs, as well and increases in system volume, or temporary decreases in service standards for customers.

Costs are likely to increase as more benefits are provided, since the most cost-effective strategies should be deployed first. Therefore, the consultant shall identify costs for defined tranches of benefits separately.

These costs can be used as a pre-feasibility level of accuracy since they are not used directly in the contract, but only for estimating budget and designing payment tranches if those used in the remuneration mechanism.

The consultant shall present its method to estimate costs in its proposal. The method to be used shall be refined in the Existing Situation Report and agreed with the client before proceeding.

The main focus should be on costs per customer put on 24/7 supply. If there are additional costs expected to be incurred in achieving other benefits, such as reduced commercial losses, these costs should be separately identified.

Costs report

The consultant shall deliver a Costs Report which, for each benefit:

* Describes the likely cost, for various tranches or levels of benefit, broken into capital and recurrent costs
* Describes how that estimate was derived
* Explains any weaknesses in the estimation approach, and hence likely biases and confidence intervals around the estimates

And in particular:

* Provides estimates of the cost imposed on the utility if additional System Input Volume is used
* Provides estimates of the costs imposed on customers through any reduction in hours of supply that occur during the project

It is acceptable for the estimates to be presented as ranges, with any bias indicated, provided that the methodology used was reasonable, and agreed with the client, accuracy levels and biases are clearly explained, and that the consultant explain how the contract can be designed in a way which is robust to biases and uncertainties in the estimates.

## Demonstrate Feasibility—Business Case

The consultant shall show that there is a feasible way to achieve the intended benefits through a distribution improvement project, possibly with accompanying measures. To do this the consultant shall:

1. Describe, at a pre-feasibility level, a technical approach which could allow the benefits to be achieved
2. Indicate accompanying measures, such as increases increased in production capacity, that would be needed to allow the benefits to be achieved
3. Drawing on the Benefit and Cost calculations presented previously, show that the project would be economically cost-benefit justified and is likely the least cost way to achieve the intended benefits
4. Estimate the effect of the project on the operating cashflows of the utility. Show that the effect is positive, or if it not, recommend how any negative impact could be offset or compensated for
5. Indicate how capital expenditure for the project, along with any initial operating cashflow deficits, can be financed, and how that finance can be serviced.
6. Recommend Key Performance Indicators which can be used to track progress
7. Identify stakeholders in the project, and whether or not they support it
8. Identify material risks to the project, and how they can mitigated
9. Set out an Implementation Plan for taking the project forward, indicating roles and timelines.

Note: that the technical approach proposed shall be sufficiently detailed to enable its cost, and benefits and financial implications to be identified, but does not need to be optimized or specified in detail. Optimization and detailed design may be left to the contractor.

Economic and financial calculations will be acceptable if they show that economic and financial viability is highly likely. If that threshold is clearly met or exceeded, precise calculations of the exact levels of net benefits or operating cash improvements are not required.

In assessing stakeholder views and support the consultant shall consult with the utility, key public sector decision-makers, and other stakeholders including employees, unions and customers.

Business Case

The consultant shall deliver a Business Case indicating if the project is viable or not, and recommending a way forward. The Business Case shall provide the information specified in items 1 to 9 above.

# Phase 2: Design SO247 Contract and Procurement Strategy

The Consultant is to develop the design for a suitable Performance Based Contract to achieve the intended benefits. The design should allow the contractor autonomy and flexibility in developing and implementing improvements, and provide incentives to for designing and implementing the program in such a way as to maximize its benefits, within constraints specified by the client.

The contractor should also sound out market interest in the proposed concept, and develop an indicative procurement strategy. The regulatory and legal framework needs to be examined to ensure that the proposed approach is feasible, and changes made if necessary. After this, the consultant should advise the client on whether to proceed with the transaction.

## Contract Design

Note: the aim here is to design a contract that achieves the desired objectives while maximizing incentives and ability for the contractor to design and implement an optimal program, and benefits to the public and the utility. Contract design should be informed by Discussion Paper 3 and 4.

The consultant should develop the design of a performance based contract. The design should include clear specifications of all the important commercial and technical terms of the contract, including those set out below.

Objective. The objectives decided on for the contract.

Contract area. This should define the area of the network on which the contractor is to work

Authority. The authority the contractor will have on questions such as implementing work, directing staff and incurring expenditure.

Approval arrangements. The things on which the contractor needs approval, and how that approval is to be obtained.

Contributions provided by the Utility. All contributions from the utility, for example of information, staff, materials, or anything else, should be spelled out.

Mandated works. While the contract should give the contractor freedom to develop a plan best suited to achieving the objective and maximizing net benefits, some works may be mandated. At a minimum, installation of a system to measure input volumes and outputs achieved will be required, and that should be specified. Any other mandated works, should also be specified. These may include:

* Work related to creation of information, such as installation of production meters, SCADA systems, GIS systems, and development of hydraulic models and water balances
* Work on the network, such as creation of DMAs, installation of pressure management system, or replacement of specified items
* Work related to the commercial function, such as customer cadaster, testing or replacement or installation of customer meters, improvements in meter-reading, billing systems, bill preparation and delivery, and collection of bills
* Maintenance of the system after the targeted gains have been made
* Training, capacity-building, and hand-back.

**How the works will be paid for and financed**. The financial arrangements should be specified. This would include: whether the contractor is supposed to pay for works, how the payments to the contractor will allow the contractor to cover its costs and make a profit if it achieves its objectives, and any financing or payment contributions from the utility or other parties.

Constraints. Any constraint within which the contractor must operate. These may include things such as: maximum financing available; maximum budget available for payment to the operator; maximum system input volume that may be used; minimum service levels that must be sustained to various customer groups during the improvement works.

Benefits sought, with payment for their provision. A clear specification, in measurable terms, of what the contractor is expected to achieve, along with payment arrangements for intended to incentivize and optimize achievement of these benefits.

Deductions from payment for resources used or service diminished. The contract should include deductions from the incentive payments for public resources used, or for diminution of benefits to the public.

Targets and KPIs. KPIs for the contracts should be specified. Targets may also be specified, with clarity on whether they are only for monitoring purposes, or whether or not they have commercial consequences, such as incentive payments for exceeding them or penalties for falling short.

Reporting and auditing arrangements. Specify what the contractor should report on, to whom, and how the reports should be verified.

Risk allocation

The Consultant shall describe the allocation of risks under the contract, including how the following risks will be handled:

* Unavailability of expected finance
* Starting values for any parameters being different from those estimated
* Works that cost more than expected
* Demand in the area being higher or lower than anticipated
* Leak reduction activities being less effective than expected
* Inability to gain permission from planning authorities to do the work required
* Change in government policy
* Utility staff not cooperating with the work as expected
* Industrial unrest
* Civil disturbance
* Other risks that could have a material impact on the success or costs of the project.

Optimization

The contract design shall give the contractor incentives to optimize the design and implementation of the projects, drawing on the principles of the Optimization Framework presented in Discussion Paper 4.

Transfer of benefits

The contract design shall maximize benefits to the utility and the public. To this end, the ways to ensure benefits are transferred (as described in Discussion Paper 4 Section 4) should be considered.

Contract Design report

The output from this task will be a Contract Design Report. This report shall:

* Set out the recommended design
* Explain why this design was chosen, and which alternative approaches were considered and rejected, and why
* Demonstrate how the contract is robust to information uncertainties, and incentives optimal planning and implementation of the project.
* Describe the mechanisms which incentivize the contractor to achieve optimal approaches, and which ensure benefits to the public and the utility are maximized

## Market Sounding

The Consultant will sound out suitable potential bidders to see if there is sufficient interest in the transaction to create competitive tension. The results of the market sounding shall be taken into account in the design.

Market sounding report

The output from this task will be a Market Sounding Report, summarizing the level of market interest, and detailing any implications for the design proposed.

## Legal and Regulatory Due Diligence

The Consultant shall carry out a legal and regulatory due diligence. This shall identify any laws or regulations with which the contract needs to be consistent. Among the legal questions that must be considered are: contract law, labor law, laws related to delegation of public authority, licenses for water service providers, utility regulation, and rights of way and access to land and infrastructure.

Legal and regulatory report

The output from this task will be a Legal and Regulatory Due Diligence Report, summarizing the above items to the extent that they are relevant to the design of the transaction, and indicating how they are relevant, and how they can be complied with.

## Environment, Safety and Social Due Diligence

Note: this may only be needed for a standalone project. If the NRW PBC is part of a larger project, the ESIA work may be bundled into that done for the larger project.

The Consultant will assess the extent to which the Indicative Strategy and Transaction Design will have environmental, safety or social implications, and recommend what needs to be done to ensure compliance with local and national standards, and World Bank Group requirements, in these areas. Cost implications must also be identified.

Safeguards report

The output from this task will be an Environment, Safety and Social Due Diligence Report, summarizing the above items.

## Procurement Strategy

The Consultant shall develop and apply an appropriate set of qualification criteria, and a recommendation for how bids will be evaluated and the winning bidder selected. This shall include:

* Recommending a qualification strategy, including, qualification criteria and whether to do prequalification
* Recommending a bid factor, and justifying the recommendation by demonstrating that it will achieve the objective of maximizing benefits to the utility and public.

## Decision to proceed to Transaction

The Consultant is to consultant with stakeholders and the client, and then advise the client whether to proceed with the transaction.

**Final Contract Design and Procurement Concept Report**

The outputs from this task will be a Final Contract Design and Procurement Strategy Report. This shall include:

* Recommendation whether to proceed or not, with reasons
* Final Business Case
* Final Contract Design
* Final Procurement Strategy

The Legal and Regulatory Due Diligence Report, Safeguards Report, and Market Sounding Report shall be annexed.

# Manage Competitive Selection Process for Contractor

The Consultant shall run a competitive process to select a suitable contractor. To do this, the Consultant shall perform the following tasks.

* Market the transaction
* Development and implement qualification criteria and a system for qualifying bidders
* Draft a sound performance based contract that effectively implements the Contract Design as agreed in the previous phase
* Prepare the Request for Proposals, including:
  + Instructions to Bidders
  + Evaluation criteria
  + Information Memorandum
  + All other legal documents required for the conclusion of an effective transaction
* Manage the bidding process for the client, including a bidders’ conference (if appropriate) dealing with requests for clarification, and receiving bids and keeping them confidential.
* Assist the client in evaluating the bids
* Assist the client in any negotiations needed to reach commercial close and, if relevant, financial close.
* Assist the client in managing the relationship with the contractor for the first three months after the client team starts work
* Assist the client in managing stakeholder relationships and communication throughout this phase

**Deliverables** from this phase will be:

* Qualification strategy
* Qualification report
* Performance Based Contract
* Request for Proposal
* Evaluation report
* Wrap-up report at the completion of the assignment. This shall describe the development and implementation of the contract, describe strengths and weaknesses of the approach, offer lesson for similar initiatives in the future, and suggest next steps for the client.

**C. SPECIFIC INPUTS TO BE PRESENTED BY THE CLIENT**

The World Bank will make available all relevant documents provided by its Client and other organizations. All information and background documents provided as part of this RFP are for the sole purpose of preparing the Technical and Financial proposal for this assignment. All information should be treated as confidential and not used for any other purpose.

**D. SPECIAL TERMS & CONDITIONS / SPECIFIC CRITERIA**

**Language**

All reports should be prepared in English, unless otherwise specified, and delivered in Word format. The financial model shall be delivered in Excel format.

An executive summary of the various documents may be provided in the primary language of the client.

**Timing/Assignment Duration**

The Consultancy will start on [xxxx]. The assignment is expected to be completed in XX months.

**Reporting**

The Consultants will report to TTL based in <XXXX> who will coordinate with the other members of the World Bank Task Team.

**Payment Schedule**

<XXXX> To be included by the TTL / procurement advisor

Required Qualifications and Experience

The Core Team will have the following qualifications:

* **Team Leader** – Must have:
  + Led the design and implementation of at least 3 successful utility improvement projects involving performance based contracts.
  + Worked on at least 3 projects involving non-revenue water control.
  + At least 10 years’ experience working with water utilities
  + Worked on at least 2 utility improvement projects in developing countries and at least 2 utility improvement projects in developed countries
  + A degree in engineering, economics, finance or law.
* **Distribution Network Improvement Engineer** – Must be a qualified engineer, and have:
  + Worked on least 5 projects to help water utilities control physical losses. Of these,
    - at least 2 must have been on networks with intermittent supply
    - at least 2 must have been in a leadership role
  + At least 10 years of experience working with water utilities.
* **Economist**—Must have:
  + A degree in economics
  + At least 5 years’ experience as a professional economist
  + Experience in calculating the Long Run Marginal costs of utility services on at least 3 previous assignments
  + Experience doing economic appraisal on at least 3 water service improvement projects in developing countries, each including both cost benefit and least cost analysis
  + Experience in calculating optimality conditions for utilities
  + Experience in designing contractual or regulatory arrangements that encourage a utility service provider to optimize planning, capital project implementation, operations and maintenance
* Financial Specialist – Must have:
  + A qualification in financial analysis
  + At least 5 years of experience with financial modelling of utilities
  + Worked on at least 3 projects involving financial modelling of water projects, at least 2 of which must have been in developing countries.
  + Specific experience in modelling NRW projects - whether PBC or traditional TAs - will be a plus.
* Utility Commercial Specialist – Must have:
  + At least 10 years of experience working on commercial aspects of utility management (customer metering, billing systems, control of illegal connections and thefts, tariff structures and demand management programs, bills collection)
  + At least 2 years of cumulative experience working with utilities in developing countries
  + A degree in at least one of: accounting, finance, management, economics or engineering
* **Lawyer** – Must have:
  + A degree in law
  + At least 5 years’ experience advising on complex commercial contracts related to infrastructure
  + Knowledge of the laws of the country concerned with utility regulation, licensing, contracts, and labor law.
* Environmental Specialist – Must have:

[Only include is ESIA is included in Scope of Work]

* + A relevant degree
  + At least 5 years of experience advising on environmental impacts and compliance for infrastructure projects
  + Worked on environmental impact analysis for at least 2 World Bank projects
  + Worked on environmental impact analysis for at least 2 projects in the country in which the project will take place
* Environmental and Social Specialist – Must have:
  + A relevant degree
  + At least 5 years of experience advising social impacts and compliance for infrastructure projects
  + Worked on social impact analysis for at least 2 World Bank projects
  + Worked on social impact analysis for at least 2 projects in the country in which the project will take place

**Additional points about the team**

* One person can fill up to three positions, provided he or she meets the criteria for all the positions for which he or she is proposed
* It will be acceptable to propose separate environmental and social specialists, provided each one meet the minimum criteria for the topic for which he or she is proposed
* The Lawyer position may be split into two positions provided the minimum criteria are met when the experience and qualifications for the position are met by the two people proposed taken together.
* The methodology must specify how the economist and the lawyer will work together to design and draft an effective, self-optimizing contract. Given the difficulty of doing this, it will be considered favorably if a single person fills both positions, provided he or she meets the criteria for both positions.
* It is acceptable to propose additional team members in addition to the core positions listed
* At least one team member must have at least 3 years of experience working with water utilities in the country in which the project will take place. This person need not be a core team member.

Potential Downstream Work

Downstream work is possible following this assignment for the repetition or scale-up of the approach, or further assistance to the client with management of the contract.

1. “Operational Manual: Global Program on Developing Good PBC Practices for Managing NRW,” The World Bank, December 2016. The Operational Manual describes the process for planning and implementing non-revenue water (NRW)-reduction projects, specifically through Performance-Based Contracts (PBCs). It focuses on the process and key decisions to be made. It outlines how the national government, the water utility, the World Bank, and the consultant should work together to improve water service quality and sustainability by correctly assessing when NRW PBCs will be useful, and implementing them well. [↑](#footnote-ref-2)
2. “Operational Manual: Global Program on Developing Good PBC Practices for Managing NRW,” The World Bank, December 2016. The Operational Manual describes the process for planning and implementing non-revenue water (NRW)-reduction projects, specifically through Performance-Based Contracts (PBCs). It focuses on the process and key decisions to be made. It outlines how the national government, the water utility, the World Bank, and the consultant should work together to improve water service quality and sustainability by correctly assessing when NRW PBCs will be useful, and implementing them well. [↑](#footnote-ref-3)
3. Estimating these benefits is a crucial task, but could be subjective and time-consuming. In many cases, it will be best to simply estimate the cost of 24/7 supply achieved with an increase in production. Competent consultants should be able to estimate this to within an acceptable margin of error within a week or so, where appropriate. This may be specified as the approach to be used. [↑](#footnote-ref-4)