Developing Good Performance-Based Contract Practices to Manage Non-Revenue Water

Introduction

The program to Develop Good Performance-Based Contract Practices in the Marketplace to Manage Non-Revenue Water, launched by the World Bank in collaboration with the Inter-American Development Bank (IDB) and the International Water Association (IWA) has the goal to “catalyze increasingly better practices in the marketplace on Performance-Based Contracts (PBCs) for non-revenue water (NRW) management.”

PBCs are an incentivized form of outsourcing technical and construction activities. PBCs are different from other forms of private sector participation, because the utility or contracting authority retains control of utility operations and assets, but takes advantage of expertise and incentivized performance of specialized private sector firms.

During a 2016 meeting of the leading global experts on PBCs in NRW management, the following key questions were considered:

- How can the design, preparation and implementation of NRW PBCs be simplified and made more cost-effective?
- How can PBCs outcomes be optimized and sustained?
- How can we support a national scale-up of an NRW program?

Seven discussion papers were used to focus discussion on the key questions:

1. Speeding Up NRW Reduction
2. PBC Objectives, Scope, Indicators, and Targets
3. NRW Reduction Optimization Framework
4. Optimal PBC Design
5. Expanding Local Private Sector Capability
6. Sustaining Reduced NRW, and

The papers discussed key barriers and suggested strategies for managing each issue. As seen in the table, some papers addressed more than one key question, presenting options and situations where they may be most suitable.

Participants provided their focused input based on their experiences in different places on critical issues of concern to the World Bank and its Program Partners. Specifically, participants’ feedback included clarification of constraints for certain approaches, preferred methods, and new options for consideration. A brief summary of each discussion paper follows.

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Speeding Up NRW Reduction

Primarily, four options for shortening the time from a country request for assistance to the start of NRW-reduction are reviewed. Options may be combined to minimize preparation time depending on the situation.

- Speeding up project preparation, through the use of a multi-stage preparation process, including an Initial Assessment and, if required, a Field Assessment.
- Planning for “Early Start” activities to be conducted during the project preparation period to improve data quality and actually begin selected NRW-reduction activities.
- Designing a PBC to include a final planning and target-setting phase in the beginning of the PBC.
- Structuring a PBC with a Program Manager, who would then be responsible for a series of construction contracts for civil works and meter replacements; and then for final diagnostics, program planning and optimization, and serve as the utility’s designated procurement manager to oversee the contracting and implementation of contracts for hardware related activities.

Objectives, Scope, Indicators, and Targets

NRW PBCs have specific objectives, scope, indicators, and targets. This paper summarizes the definitions of key terms, and then describes considerations for selecting each parameter in a given situation.

- **Objectives** define what the PBC intends to achieve, including big problems and root causes. It is crucial at this stage to select the most important drivers in the current situation.
- **Scope** indicates the time frame, geographical focus, and NRW components (or other outcome parameters), and functions and activities to be undertaken by the Contractor.
- **Indicators** are the technical, financial, or operational parameters by which baseline performance will be specified, and by which performance will be measured over the Contract period.
- **Targets** are defined as the expected outcome values or net changes in the value of an indicator, based on the work of the contractor (and associated parties).

Tools outlined in the paper can improve the target setting process.

NRW-Reduction Optimization Framework

This paper offers an optimization framework for rationally setting targets and payments that will deliver maximum public value toward project objectives. The framework encourages policy makers to think beyond reducing NRW, to the broader benefit that NRW-reduction serves. The paper summarizes the objectives commonly served by NRW-reduction, how progress toward those objectives can be measured, and the value of such progress in terms of the economic benefits of a one-unit movement toward the objective.

The framework shows that the optimal level on any of the objectives is the level at which the cost of adding an additional unit exceeds the value of the unit added. Therefore, this framework can help policymakers to think about the objectives to set for an NRW-reduction contract, and the payments that it would be reasonable to make to achieve those objectives.

Optimal PBC Design

This paper helps practitioners with designing an optimal contract that best achieves the public interest by optimizing targets and payments, incentivizing contractors to create maximum value while paying them no more than is necessary to incentivize them to deliver that value. It considers:

- The benefits and disadvantages of an inclusive contract, which bundles most or all program components into a single contract. The greatest benefit is that an inclusive contract creates a single point of accountability and allows the contractor control in implementing the program. A disadvantage of the inclusive contract is that a considerable amount of information on network conditions and costs of NRW-reduction is needed to allow contractors to price NRW-reduction and bid on an all-inclusive contract. Where information cannot be collected with a high degree of reliability, contractors may perceive high risks and refuse to bid, or add in a large premium to cover the risks.
- How to optimize the contractor’s efforts and results, through paying the contractor the marginal value of the output produced.
Obtaining optimal results through an approach that pays contractors a specified amount per unit of improvement achieved, rather than linking payments to reaching a pre-specified target.

The option of tranched payments (in which lower, per-unit payments are made for the first units of improvement, with payments increasing toward their marginal value as the total amount of improvement made increases) and the use of the Program Management Contract, in which the utility only ever pays the actual costs of improvements, as established through competitive bidding for works and equipment bid outside the performance-based-contract.

Expanding Local Private Sector Capability

This paper describes how the supply of local and regional local firms can be developed, expanded, and diversified. Many countries could benefit from the presence of more skilled providers locally or from a neighboring country. In addition, having more experienced local and regional contractors can create further competition between the local regional firms for smaller, less-specialized PBCs. Increased competition will generally drive down prices and encourage innovation. Also identified are barriers and the interventions that may resolve them. See table above.

Sustaining Reduced NRW

PBCs that reduce NRW only for the contract term waste public resources and require additional efforts to reduce losses. This paper identified three basic options for sustaining reduced NRW levels, and associated benefits:

- Follow-on PBC: This option consists of planning for a follow-on PBC, procured through a competitive tender and bid process, for extended NRW maintenance or further reduction with, ideally, no gap between the two contracts to allow a smooth transfer of knowledge, personnel, information, and practices.
- Full Transfer to the Utility: This option consists of planning a direct and full transfer of NRW management responsibility to the utility, ideally over a maintenance phase lasting several years.
- Gradual Transfer to the Utility: This option involves conducting a gradual transfer after an initial NRW-reduction phase, integrated into a lengthy maintenance phase. In the initial stages of such a gradual transfer, the utility would bring some NRW practices and functions in-house, and continue to outsource others. Over time, there would be a step-by-step transfer to full or nearly full utility-led operations.

### Barriers to Promoting Good PBC Practices for NRW in the Marketplace

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| Lack of market coordination   | • Development of a pipeline of projects  
                                 | • Surveys of local firms’ capabilities  
                                 | • Capacity-building and financing interventions                                     |
| Lack of technical skills      | • Training and accreditation and certification programs                                  |
| Lack of financing             | • Equity investment from IFIs or international private sectors companies                |
                                 | • Credit line or risk-sharing facilities to encourage commercial bank lending          |
| High transaction costs        | • In-country standardization of tendering process and contracts                        |
                                 | • Build-up of demand to expand the market and lower transactions costs                 |
                                 | • A smaller start-up phase                                                            |
| Procurement procedures        | • Shifting focus from firm requirements to staff requirements                           |
                                 | • Changes in or additions to procurement laws                                         |

### Barriers Possible Interventions

- **Lack of market coordination**
  - Development of a pipeline of projects
  - Surveys of local firms’ capabilities
  - Capacity-building and financing interventions

- **Lack of technical skills**
  - Training and accreditation and certification programs

- **Lack of financing**
  - Equity investment from IFIs or international private sectors companies
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- **High transaction costs**
  - In-country standardization of tendering process and contracts
  - Build-up of demand to expand the market and lower transactions costs
  - A smaller start-up phase

- **Procurement procedures**
  - Shifting focus from firm requirements to staff requirements
  - Changes in or additions to procurement laws
National Scale-Up

In some countries, the use of PBCs has expanded because of conventional market processes, including increased demand for services and a response from local and international contractors. However, experts encourage national scale-up, especially in situations with decentralized municipal utilities and weak regulation. Elements of a National Scale-Up Program can include: policy dialogue with political, commercial, and administrative stakeholders; creation of an incentive environment for utilities; regulation of performance and pricing; financing instruments (such as revolving funds or municipal development banks) to address project feasibility work and financing for implementation; utility capacity-building; utility partnerships and collaboration; engineering and construction industry capacity-building; procedural Toolkit and Operational Manual; and monitoring systems.