

DESIGNING WATER & SEWERAGE OPERATING CONTRACTS: TEMPLATES FOR COUNTRY TEAMS

This set of templates is used to organize the design process. Record your team's ideas on relevant topics in the templates. The forms prepared for each design session are intended to guide you through some of the major questions that need to be answered in designing an effective contract strategy. All topics and questions do not need to be completed; please complete the ones that are important for your specific operating contract design.

Design Session 1: Target Locations and Objectives

Design Session 2: Key Design Problems and Challenges

Design Session 3: Operator Compensation, Performance Targets, and Incentives

Design Session 4: Basis for Tendering and Award

Design Session 1: Target Locations and Objectives

During this session you will define the service area(s) for which you plan to design an operating contract and the key performance objectives that you wish to achieve. Some questions are provided to guide you through this exercise; however, please feel free to provide any additional information that you believe is important to provide a clear picture of the current conditions and issues in the target locations.

1.1 DEFINITION OF SERVICE AREA:

Where will you use an operating contract?

a. Name/location of service area:

Gharbeya Water and Wastewater Company located in the Delta

b. Description of customer service base (number of residential/commercial/industrial):

4,170,000

c. Current coverage (% or number of connections):

90% water/35% wastewater

730,000 water connections

348,000 wastewater connections

d. Description of current institutional arrangements of the water utility:

Who owns the assets?

Holding Company for Water and Wastewater/100% owned by Government

Who currently manages the assets?

Gharbeya Water and Wastewater Company

Who is responsible for business management (billings, accounting, customer service, etc.)?

Gharbeya Water and Wastewater Company

If there is an independent regulatory body, please identify:

Egyptian Water Regulatory Agency – not yet regulating the Gharbeya Company

e. Additional information:

The Minister of Housing, Utilities and Urban Development (MHUUD) is Chairman of the EWRA Board of Directors and Chairman of the Holding Company General Assembly

1.2 SUMMARY OF KEY PROBLEMS TO BE SOLVED:

What key problems do you want to solve? Please describe the extent of the problem, e.g., current % of nonrevenue water. Examples of problems that you may wish to address are provided:

High non revenue water	26%
Intermittent service	
Low billings and collections	76% of current billings plus arrears
High degree of customer complaints	
High operating ratio (total expenses/total revenues)	
Low percentage of connections, etc.	
O&M cost recovery	76% from operating revenues
Sewerage treated	78%
Maintenance of treatment plants	bad
Percentage of samples meeting standard	56% wastewater/88% water
Wastewater coverage	35%

1.3 STATEMENT OF PERFORMANCE OBJECTIVES:

Based on the current situation in the target service area and key problems that you want to solve, list your highest priority objectives (please provide no more than six objectives). At this point, you do not need to establish quantitative objectives. Instead, the objectives should be broad statements of the most important accomplishments to be achieved through operating contracts, for example:

- To achieve full recovery of operation and maintenance costs
- To make significant improvements in physical assets
- To increase the number of service connections
- To improve the quality of service to existing customers

SUMMARY OF COUNTRY TEAM PRODUCTS FROM DESIGN SESSION 1

1. Definition of service area:
 - Location/Name
 - Key Characteristics (customer service base, current coverage, institutional arrangements, etc.)
2. Key problems to be solved
3. Statements of performance objectives

Design Session 2: Key Design Problems and Challenges

During this session you will identify key obstacles and risks that may complicate or impede the contracting process. You will also develop a framework to reduce these risks by including special provisions in the contract and by allocating the risks among the contracting parties to those that are most able to bear them.

2.1 SPECIAL ISSUES TO BE ADDRESSED IN THE DESIGN

a. **Tariffs:**

What are the current tariff levels and structure?

Are tariffs too low to cover operating costs? Are they too low to provide incentives to serve the poor?

Do you have any specific tariff-setting objectives?

Can you adjust tariff levels to cost-recovery levels?

Can you eliminate or reduce cross-subsidies?

Can you raise tariffs to the poor to levels that are attractive to service providers?

b. **Investment needs:**

Does the system require a large amount of investment?

What kinds of investments are needed (e.g., bulk water supply treatment facilities, network expansion, etc.)?

c. Labor issues:

Do workers have unreasonably low wages now?

Can workers be legally assigned to work with the contractor?

Is it legally possible to provide bonuses to employees?

Are employees likely to oppose the contract?

d. Corruption:

Is corruption a major problem? If so, what kind of corruption?

e. Very bad service:

Are service levels unusually bad at the present time?

What features of service are considered to be very bad?

f. Stakeholder mapping

Do all stakeholders (government, donors, and other support agencies) buy into the contractualisation process?

Does the contractualisation process fit into the overall sector-wide reform strategy?

How does the contractualisation process promote effective sector governance (anti-corruption and integrity programs, community outreach, communication and fraud prevention)?

- g. Please list any additional special issues that you believe may pose serious obstacles or risks to implementing operating contracts:**

2.2 UPSTREAM POLICY NEEDS

Is there any need to revise laws or policies as preconditions for the operating contract?

These could include:

- Water legislation
- Sanitation/environmental legislation
- Corporate/contract law
- Regulatory framework
- Licensing framework

2.3 STRENGTHS, WEAKNESSES, OPPORTUNITIES, AND THREATS (SWOT) ANALYSIS

The matrix on the following page provides an organizing tool with which to identify strengths, weaknesses, opportunities, and threats and re-allocate risks among the contracting parties as needed. An example from an actual operating contract application (provided by Uganda NWSC) is provided as a guide.

FUNCTION	STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS

Example of SWOT Analysis – Uganda National Water and Sewerage Corporation, Jinja Service Area

Function/Business aspect	Strengths	Weaknesses	Opportunities	Threats
Distribution	<ul style="list-style-type: none"> ✘ Some old, weak mains have been replaced. ✘ Monopoly of services delivery. ✘ Comprehensive network coverage. ✘ Competent and well-equipped workforce. ✘ Available basic equipment and personnel. ✘ Basic record of network available. ✘ 100% metering. 	<ul style="list-style-type: none"> ✘ Old, weak mains prone to bursts. ✘ Inadequate auxiliary structures; i.e. washouts. ✘ Hydraulic constraints. ✘ Disparity between field and reports made. ✘ Poor meter management. 	<ul style="list-style-type: none"> ✘ Unsaturated distribution coverage. ✘ Monopoly of service delivery. ✘ Availability of cheaper local alternative materials. ✘ Communication facilities. ✘ Goodwill from the public for mains extensions. ✘ Flexible budget. ✘ Local participation in infrastructural development. ✘ Political will to support development. ✘ Protection by local communities. 	<ul style="list-style-type: none"> ✘ Vandalism of service network. ✘ Technical impersonation. ✘ High cost of repair materials.
Water losses	<ul style="list-style-type: none"> ✘ Good response time. ✘ Many old mains are replaced. ✘ Replacement of key old, weak mains is already planned. ✘ District metering already done in most places. 	<ul style="list-style-type: none"> ✘ Lack of intensive patrol of the network for leaks and bursts. ✘ Lack of accurate documentation of the network. ✘ Partial district metering. 	<ul style="list-style-type: none"> ✘ Commitment of top management. ✘ Public goodwill / concern. 	<ul style="list-style-type: none"> ✘ Vandalism of the infrastructure. ✘ Illegal water consumption.
Maintenance	<ul style="list-style-type: none"> ✘ Adequate stock of basic maintenance equipment. ✘ PPM is put in place and followed. ✘ Adequate transport for maintenance work. ✘ Ability to locate all services network. 	<ul style="list-style-type: none"> ✘ Lack of mechanical equipment. ✘ Inadequate skills in maintenance field work. ✘ Use of rudimentary repair methods. ✘ Archaic technology in mains maintenance 	<ul style="list-style-type: none"> ✘ Local labour readily available. ✘ Commitment of top management. ✘ Commitment of customers. 	<ul style="list-style-type: none"> ✘ Inadequate of coordination in infrastructural development.

SUMMARY OF COUNTRY TEAM PRODUCTS FROM DESIGN SESSION 2

1. List of special issues that need to be addressed
2. List of upstream policy needs
3. SWOT matrix
4. Determination of the most appropriate form of contract (management contract, lease or affermage, or concession)

Design Session 3: Operator Compensation, Performance Targets, and Incentives

During this session you will identify performance targets and the associated incentives and compensation provisions for meeting and exceeding the targets.

3.1 SERVICE GOALS, TARIFFS, AND INVESTMENT FUNDING

a. Access:

What is the starting and ending level of coverage that is required?

Where will the capital come from to increase coverage?

What types of connections will be provided?

b. Water Supply Performance Targets:

(Please prepare your results in the table provided at the end of Section 3.1)

What are the current water supply quality levels and what are the target levels you wish to achieve, in light of your performance objectives?

For each target: What are the practical issues that stand in the way of achieving the quality targets? Will any of the targets require large amounts of investment? How will you weight each of the targets for purpose of bonus computation?

Following are illustrative examples of targets that you might want to consider:

- Hours of service per day
- Pressure levels
- Service coverage
- Nonrevenue water
- Environmental standards exceedances, etc.

In formulating performance targets, please consider the following:

- How many performance indicators should be put in the contract?
- Which performance measures are non-volatile and therefore provide stable bases for incentives?
- Is there a good record of historical performance with which to form a fair basis for target negotiations?
- Which performance areas are closer to best practice?
- Which performance targets might be most affected by exogenous factors?)

c. Wastewater:

Please provide similar information for wastewater collection and treatment targets, if applicable, in the same format as for the previous question.

d. Availability of Funds Required for Achieving Targets:

What investment funds are available?

Will an investment fund be established?

Where will the capital for wastewater facilities come from?

What subsidy funds are available?

**Performance Targets for First Three Years of Contract
(Water and wastewater performance targets)**

Type of Target	Relative Weight (%)	Year 1 Target	Year 2 Target	Year 3 Target	Investment Required (Scale of 0 to 3)	Critical Issues
	100%					

3.2 TARIFF ADJUSTMENT, EXTRAORDINARY ADJUSTMENTS, AND RISK ALLOCATION

a. How are tariffs going to be adjusted?

What is the tariff setting method?

Will there be cost pass through rules?

Will there be tariff indexation formulas?

b. What happens if extraordinary adjustments are needed?

c. How are key risks allocated?

Financial risks, for example:

- **Operating cost risk:** The risk that operating costs are higher than expected
- **Commercial performance risk:** The risk that billing and collections will be lower than expected
- **Bulk water:** The risk that the volume or price of bulk treated water is not as expected
- **Capital funding:** The risk that capital funding is not available when expected, or that the interest rate is higher than expected, or that the amount is less than expected
- **Foreign exchange:** The risks that exchange rates fluctuate in ways that cannot be anticipated.

- Other risks, as identified during SWOT analysis:

3.3 MANAGEMENT OF THE CONTRACT

- a. Who monitors the operator's performance?**

- b. Who enforces the terms of the contract?**

- c. Who monitors the government counterpart to the contract?**

- d. Who enforces the government's performance obligations?**

- e. Who resolves disputes?**

- f. Who adjusts tariffs?**

- g. Who adjusts service standards?**

3.4 TYPE OF CONTRACT, INCENTIVES, AND RESPONSIBILITIES

Based upon the preceding analyses, you will now work with your coaches to decide upon the most appropriate contracting strategy.

a. Type and duration of contract (management/lease/affermage/concession):

b. Types of incentives (tied to specific targets identified in Section 3.2 and to overall performance of contractor). See the following two pages for examples of incentive fees for management contracts and penalties for lease contracts:

To what extent will bonus fees or penalties be tied to individual performance targets, and to what extent will they be tied to overall financial performance of the utility?

How much of the net financial gain from good performance of the contractor are you willing to relinquish to the contractor?

Are staff motivated by non-financial incentives (such as recognition)?

What are the priority performance areas that must be central to incentive design?

How do we incentivize risk-taking?

Who must earn incentives and to what extent?

c. Allocation of responsibilities in contract implementation:

Operation and maintenance:

Capex (major capital works and capital maintenance):

Commercial functions:

Disconnection:

Theft and corruption:

Subsidies:

Public capital funding:

EXAMPLE OF INCENTIVES IN MANGEMENT CONTRACT (Uganda National Water and Sewerage Corporation – Jinja Area)

SIXTH SCHEDULE – JINJA AREA

COMPUTATION OF THE MANAGEMENT FEE AND INVOICE FORMAT

The monthly Management Fee payable to the Operator shall be the sum of the Base Fee, the Performance Fee and Incentive Fee due for a given month; and will be computed on the following basis:

Sno	Component	Computation Formula	Remarks
1	Base Fee ¹	$F_C + 0.75(C_C)$	Where: F_C = Non-controllable (fixed) costs C_C = Controllable costs
2	Performance Fee ²	$0.25(C_C) * [P/N]$	Where: P = The weighted number of service standards that have been achieved for the given month N = 100 = The total weighted number of service standards to be achieved
3	Incentive Fee ³	$X\% * [K + (OM_E - OM_O)] * [0.3WR_{pa} + 0.3UFW_{pa} + 0.2CE_{pa} + 0.2CP_{pa}]$ The formula is applicable only if: $OM_E > OM_O$	Where: K = A constant representing the level of incentive equity/subsidy extended to non-break even and/or "small" Areas OM_O = Minimum cash operating margin based on the agreed OPEX (Base Fee + Performance Fee) and the set Minimum Standard for collections. OM_E = The achieved cash operating margin during the month being evaluated X% = The agreed %age of the improvement in OM to be retained by the Operator as bonus. WR_{pa} = Percentage incremental achievement in the improvement of the Working Ratio UFW_{pa} = Percentage incremental achievement in the reduction of Unaccounted for water CE_{pa} = Percentage incremental achievement in the increase in Connection Efficiency CP_{pa} = Percentage incremental achievement in the reduction in the Collection Period

EXAMPLE OF PENALTIES IN AFFERMAGE CONTRACT (India – Latur Water Supply Scheme)

SCHEDULE H

SCHEDULE H– SERVICE LEVELS

A) Minimum service level:

- 1) It is the responsibility of the contractor to ensure and maintain the distribution system in such a way that, the consumer can draw water on an average at 100 LPCD with minimum @ 80 LPCD in supply hours. If there are public complains to MJP, MJP is free to measure the quantity of water supply at any remote connection. In such measuring, if it is found that some of the connections are getting less than required quantity of water, during supply hours, then if asked it is mandatory to the contractor to investigate the reasons and rectify them in such a fashion that consumers can get required quantity of water. The required repairing / rectification should be completed within 3 days of complaint at his cost. The required extension of existing pipeline upto 1 km. per year shall be the responsibility of the contractor. The required pipes will be supplied by the department free of cost. The cost of jointing material and labour charges shall be borne by the contractor.
- 2) The Executive Engineer-at his discretion or in response to complaints of short supply of water from Consumers in a particular area or zone shall assess the quantity of water supplied to the area or zone served by an ESR in accordance with the following:

The Executive Engineer shall assess the quantity of water supplied to the zone for a continuous period of 7 (seven) days. The quantity of water supplied to the zone shall be considered based on the daily meter readings on the outlet points of the ESR. The Average Daily Quantity shall be compared with the Benchmark Quantity assessed as under:

$$\text{Benchmark Quantity} = \frac{\text{Required Quantity}}{(1 - \text{Distribution Loss}\%)} + \text{Bulk quantity}$$

Where:

Required quantity (liters) = Number of households x 7 x 100

Distribution loss = Distribution loss for the ESR covering the area/ zone under evaluation calculated in accordance with Clause 11.3 for the pervious month

Bulk quantity = $\frac{\text{Actual consumption for the pervious month}}{\text{Number of days in the month}}$

In the event of Average Daily Quantity being between 70 to 80 % of the Benchmark Quantity then a penalty of Rs. 500/- (Five Hundred) per day shall be levied.

In the event of Average Daily Quantity supplied is between 50 to 70% of the Benchmark Quantity then a penalty of Rs. 1000/- (One thousand) per day shall be levied.

SUMMARY OF COUNTRY TEAM PRODUCTS FROM DESIGN SESSION 3

1. Key performance targets and associated investment needs and funding
2. Provisions for tariff and contract adjustments
3. Allocation of risks among contracting parties
4. Assignment of contract management and implementation responsibilities
5. Incentive structure

Design Session 4: Basis for Tendering and Award

During this session you will determine the key criterion upon which bidders will be evaluated and selected.

4.1 ELIGIBLE FIRMS

Do you want national firms to be favored?

Do you want to encourage joint ventures between international and local firms?

What experience in water and sanitation must bidders have?

What financial capacity must be demonstrated by bidders?

4.2 BASIS FOR SELECTING THE CONTRACTOR

What will be the relative weights of evaluation factors?

Cost/price:

Proposed technical approach:

Experience of contractor:

Commitment to performance targets:

Other:

4.3 EVALUATION OF TENDERS

a. Who will be on the evaluation panel?

b. Evaluation procedure (prequalification or two-step process?):

SUMMARY OF COUNTRY TEAM PRODUCTS FROM DESIGN SESSION 4

1. Determination of eligibility of bidders
2. Basis for contractor selection
3. Process for evaluation of tenders