

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.

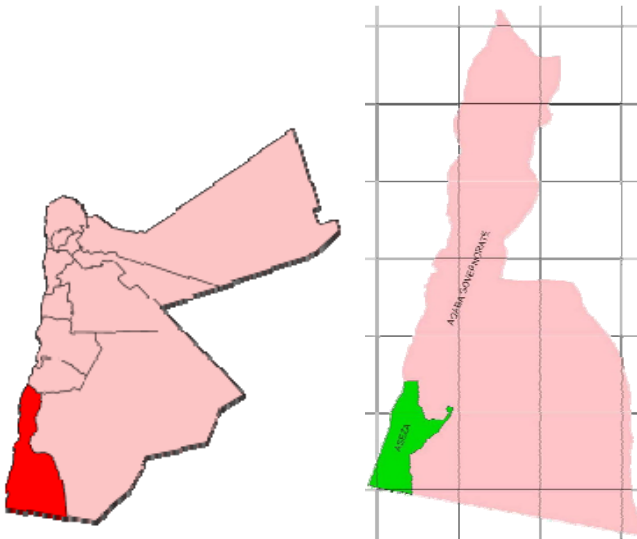
1.1 DEFINITION OF SERVICE AREA:

Where will you use an operating contract?

a. Name/location of service area:

Aqaba water company (awc)

Aqaba governorate ,located 350km south of Amman



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

Residential	19%
Industry	39%
Commerce	6%
Touristic	8%
Services	2%
UFW	23%

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

Water-mains length is over 880Km. It serves 99.2% of the population in the governorate
Wastewater-mains length is over 280Km serving 86% of Aqaba population

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

Who owns the assets?

Who currently manages the assets?

a

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

If there is an independent regulatory body, please identify:

e. Additional information:

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 nonrevenue water
- Intermittent service
- Low billings and collections
- High degree of customer complaints
- High operating ratio (total expenses/total revenues)
- Low percentage of connections, etc.

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?

It is escalating according to the consumption ,and it is quarterly issued.

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

Yes it is very low to cover the O&M cost.

The poor villages are served freely except the connection fee

Do you have any specific tariff-setting objectives?

To keep the system running ,and to cover the O&M cost however

There is a political constraints for the tariff in jordan

Can you adjust tariff levels to cost-recovery levels?

No, because the tariff in Jordan is set by the cabinet

Can you eliminate or reduce cross-subsidies?

No, it will not be eliminated because of the law In jordan

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

No

b. Investment needs:

Does the system require a large amount of investment?

For the time being we are only looking for management contract, and not looking for major investment but it can be looked into in the future.

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

Bulk meter, water meters, leak detection unit and spare parts like pipes and fittings etc.

c. Labor issues:

Do workers have unreasonably low wages now?

no

Can workers be legally assigned to work with the contractor?

yes

Is it legally possible to provide bonuses to employees?

yes

Are employees likely to oppose the contract?

no

d. Corruption:

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

Yes, miss management

e. Very bad service:

Are service levels unusually bad at the present time?

No it is ok

What features of service are considered to be very bad?

The service is not bad but we have the problem with the collection

f. Stakeholder mapping

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

Yes, we don't have problem

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

yes

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

With the new reform and system improvement through contracting and the participation of the private sector every thing will be solved

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

Jordan policy allows and encourage water system privatizations

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
Meter condition and inspection	Most of the costumers have meters and have id# and most of them are sealed	Some of the meters are inside premises and cannot be reached easily. we have also scattered meters. The seal can be easily removed	Suggested new and good type seal with stamp on it. Save box for the meters and penalty	vandalism
Billing	Staff are from the same area All billing are computerized, and there is new technology for meters	Estimated reading for some customers	Using hand held unit to get the meter reading	
Collection	The collection is quite good in Aqaba	The low collection is mainly in the villages because the in habitants in the villages thinks that all water sources belong to them and poverty	Lecturing and training of the people in the villages and public awareness plus penalty to be applied	Disconnection
Meter reading	Most of the staff are well experience for this purpose	But the readers in the villages are not efficient and some time they do not report about illegal connections	Give incentives to the meter readers	

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?

We have 99.2% coverage and our target is 100%

Where will the capital come from to increase coverage?

From awc income

What types of connections will be provided?

Meter connections

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
Assessment of meter conditions and how many are working properly	30	80%	90%	100%	0	
Meter readings	15	100%	100%	100%	0	
Bill distribution	25	80%	90%	95%	0	
Percent of collection	30	70%	85%	90%	0	
	100%					

3.2 TARIFF ADJUSTMENT, EXTRAORDINARY ADJUSTMENTS, AND RISK ALLOCATION

a. How are tariffs going to be adjusted?

What is the tariff setting method?

N/A

Will there be cost pass through rules?

N/A

Will there be tariff indexation formulas?

N/A

b. What happens if extraordinary adjustments are needed?

If an extra ordinary events happened then the contractor has the right to request for compensation based the percentage of the damage (e.g if the damage is about 20% the compensation value will be 5%)

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:

If the contractor doesn't perform then the contract will be terminated

3.3 MANAGEMENT OF THE CONTRACT

a. Who monitors the operator's performance?

AWC

b. Who enforces the terms of the contract?

AWC

c. Who monitors the company counterpart to the contract?

The project management unit (PMU)/WAJ

d. Who enforces the company performance obligations?

Amicable solution if not , then arbitration as defined in the contract and according to Jordanian laws

e. Who resolves disputes?

If not resolved then court as it is defined in the FIDIC

f. Who adjusts tariffs?

N/A

g. Who adjusts service standards?

AWC upon mutual agreement

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):**
service contract for 3 years

- 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?

Assessment of meter conditions and how many are working properly	
Meter readings	
Bill distribution	
Percent of collection	If the collection is above the target percentage then the bonus will be 10% of the extra amount

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

10% of the Extra

Are staff motivated by non-financial incentives (such as recognition)?
Some time but money seems to motivate people more

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

The improvement of the actual amount collected

How do we incentivize risk-taking?

N/A there is not much risk

Who must earn incentives and to what extent?

N/A

b. Allocation of responsibilities in contract implementation:

c.

Operation and maintenance:

AWC

Capex (major capital works and capital maintenance):

AWC

Commercial functions:

Customer services

Disconnection:

The contractor

Theft and corruption:

The contractor enforce AWC regulation

Subsidies:

N/A

Public capital funding:

AWC

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?

Yes ,as long as the firm is qualified to do the job

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

Yes, we encourage that if the local contractor is willing to joint venture with an international Contractor

What experience in water and sanitation must bidders have?

Financial and customer service

What financial capacity must be demonstrated by bidders?

- annual turnover of not less than 0.5 million JD
- registered in the ministry of industry and commerce
- bank guarantee
- company capital not less than 200000 JD

4.2 BASIS FOR SELECTING THE CONTRACTOR

What will be the relative weights of evaluation factors?

Cost/price:

25%

Proposed technical approach:

25%

Experience of contractor:

10%

Commitment to performance targets:

20%

Other:

Proposed staffing structure and qualifications and experience

20%

4.3 EVALUATION OF TENDERS

a. Who will be on the evaluation panel?

Committee from AWC (technical, financial, legal) plus a representative from PMU/WAJ

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

Tender will be open for the first class engineering firms specialized in water and waste water

Two-step process (technical and financial)

SUMMARY OF COUNTRY TEAM PRODUCTS FROM DESIGN SESSION 4

1. Determination of eligibility of bidders
Priority for Jordanian first class engineering firms
2. Basis for contractor selection
Financial 25%, technical 75%
3. Process for evaluation of tenders
 - 1- **First is the technical evaluation (firms with score of 75% and above will be qualified to open their financial offer)**
 - 2- **Conduct the financial analysis**
 - 3- **Calculate the equivalent weight**
 - 4- **Award to the most cost effective offer**