Optimising project finance solutions in the water sector

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PART III: DEVELOPING SUSTAINABLE PPP ARRANGEMENTS
10. IMPROVING KEY CONTRACT PROVISIONS

10.1 Introduction

In this chapter I look at some of the major issues to be considered when formulating the contractual arrangements for a water and wastewater PPP scheme. By their nature PPP arrangements are complex, and each arrangement has its own set of interlinking contracts and agreements that are needed to establish allocation of risks and responsibilities, as well as to deal with financial obligations and cash flows. Depending on the risk allocation of each type of contract, as discussed in Chapter 3, section 3.3 each contract will allocate risk and responsibilities differently between the parties. Arguably, the most complex of these contractual arrangements is a long term concession type contract. For this reason, I use a PPP contract structure to illustrate some of the main contractual issues to be considered. I also detail some of the associated contracts that would typically be used by the Grantor as a means of sharing the risk among the project participants.

This chapter is designed to give an outline to the key issues to be considered when designing and applying a new water PPP agreement. The majority of the new water PPP projects reviewed during this research have involved major project investment, with the majority of investment commitment by the Private. It should be noted that many of the points covered here (i.e. those not specifically related to investment) will also apply to the other non-investment contract forms, such as a management contract. For contracts which include delegated management to the private sector but with no (or little investments by the private sector) such as lease / affermage type contracts, the provisions in this section will also apply. This chapter also assesses the basic need for subsidiary agreements to the main PPP agreement, specifically to gain an appreciation of the potential complexity of a complete contract structure and interlinking of the various contracts, land lease, water abstraction license (as appropriate), lenders direct agreements and technical annexes involved.

For ease of reference I have divided the recommended provisions in the following way:

- Provisions during Development mainly aimed at setting out the role of the Grantor after signature of agreement and prior to service being effective should be established:

- Provisions related to Construction and Assets: this whilst not the main focus of this type of PPP agreements is dealt with to detail the conditions the General Construction requirement that details the relationship between Contractors and Sub-contractors. It also includes valuation and calculation of terminal payments of assets at the end of the PPP agreement period

- Provisions related to Service Obligations: this is the main section and great attention is placed on making recommendations as to what has worked and what can be improved for the future.
Provisions Applying to Financing to include protections for lenders through drawdown schedules, construction milestones and reserve accounts etc. including security rights to ensure lenders are protected from unsecured or junior creditor actions.

10.2 Contract Form and Risk Allocation

Contracts are important tools regardless the type of PPP form chosen and the level of government support whether the Developer is owned privately, or by the Grantor or is another public body. Furthermore, contracts are required whether or not the project is subject to a competitive procurement process. They can define a wide variety of objectives: economic, financial, social, and environmental, not only on behalf of the Grantor but also of other local, regional, or national stakeholders. They help to give clarity and an objective basis for the development of the water and wastewater sector. Consequently, the use of PPP agreements is often promoted by external regional, national or supra-national agencies to enshrine policy objectives and to implement specific policy actions.

Contracts have been used to change the relationship between Authorities and local publicly-owned service providers, either by these providers being replaced by new Developers or to distance Authorities from the local publicly-owned service providers and to make the providers clearly accountable for quality-of-service.

Each PPP contractual structure has to be tailored to suit the specific PPP scheme. We will use a typical long term Concession Contract to illustrate some of the key issues to be considered when establishing a PPP arrangement. In this contract type, the Public Authority contracts with an outside organization to construct, rehabilitate, operate and, simultaneously, to provide services to specified quality-of-service standards at a pre-defined tariff. The Developer must, consequently, provide from internal resources or via external financing the required inventory of fixed and moveable assets. The Developer will also retain all revenues and will absorb either all, or a contractually agreed portion of, traffic/revenue risks as well as the risks associated with construction. Risk-sharing may also extend into the areas of regulatory risk.

Any contract allocates obligations and risks to the parties and consequently sets out the financial linkages between the parties. These arrangements are complex and one way to demonstrate this complexity (and a useful tool in the analysis or development of a full contract arrangement) is to show the linkage of the different parties in two ways:

1. The contractual instruments linking the parties
2. The cash flows (or potential cash flows) linking the parties

In the following diagram illustrate the necessary contractual and financial linkages between the parties to a PPP agreement. When designing a PPP arrangement it is useful to start by defining key linkages in this way. This approach can be used to establish agreement on broad principles of the contract structure, before moving onto detailed contractual design. The first diagram establishes all the main contractual linkages, each of which requires its own contract document or agreement, and in the second diagram we note some of the main cash flows which are also dealt with contractually.

Contractual Linkages

The diagram below shows the typical contractual relationships within a PPP agreement. The Grantor grants a right to operate, maintain, construct, rehabilitate and charge for water and wastewater services to a Developer. The terms of the PPP agreement set out the rights and
obligations of the parties. The PPP agreement allows the Grantor to allocate project risk to the Developer and to define the risk sharing among the project participants. The PPP agreement may also set out the legal and tax regimes applicable to the project, including the environmental obligations of the Developer.
In defining the PPP agreement it will be necessary for the Grantor to have clarity on a number of matters including, in particular:

- The overall risk allocation i.e. which party assumes or is responsible for managing associated risks. Annex 4 provides a risk allocation matrix which can be used as an aid to determine the optimum risk allocation.

- How it is anticipated that the Developer will raise the revenues necessary to be able to fund what will be significant capital expenditure and, as a related issue, what type of financial support will be available from the Grantor.

For this reason it is not uncommon for the Grantor to, as part of the PPP agreement, set out subsidiary documents which define and describe in some detail the other contractual relationships which are considered crucial for the integrity of the PPP agreement.

The Grantor will also seek to ensure that the Developer performs against a minimum set of standards and overall requirements. The Grantor’s requirements will cover issues such as coverage, quantity and quality of service provision. Below is a summary of the main issues the PPP agreement will seek to cover which include (adapted from Delmon 2009):
• **Completion date.** The Grantor's need for the infrastructure in question is generally immediate (often as much for political as practical reasons).

• **Performance of the project.** The Grantor's requirements will cover issues such as input consumption, efficiency of operation, maintenance needs and costs, life-cycle, health, safety, environmental, quality/quantity of the output/service generated and cost of operation.

• **Maintenance regime.** The Grantor will want to ensure that the maintenance and rehabilitation regime implemented is adequate and sufficient. This is even more important late in the project as the incentive for the Developer to invest funds during the final phase of the concession period may be diminished, owing to the imminent transfer of the project to the Grantor.

• **Construction and operation.** The Grantor will want to ensure that the Developer's construction and operation activities meet certain minimum standards, both those imposed by law and those specified by the Grantor to ensure the quality of the services provided and the protection of the public.

• **Government guarantees.** The government may provide guarantees for public sector bodies taking part in the project whose credit risk is otherwise insufficient.

• **Exclusivity.** The Grantor will need to provide the necessary assurances that the developer can abstract, discharge and the authority to serve the customer base. As previously noted the water and wastewater sector is typically a natural monopoly and therefore the conditions on this will need to be confirmed in the PPP agreement.

• **Know-how transfer.** The Grantor may want to maximize the interaction between the Developer and local partners or the Grantor's personnel in order to ensure the proper transfer of know-how.120

• **Government interference.** Notwithstanding the regulatory provisions and authority under the PPP agreement, the Grantor may undertake that the host government will not act against the interests of the lenders, the shareholders, the Developer, the performance of the Developer's obligations or the project itself, to protect the Developer from a specific sub-set of political risk.

• **Concession fees.** The Developer may be required to pay concession fees for the privilege of obtaining a concession and to offset Grantor costs, payable before commencement and possibly periodically during the concession period.

• **Restrictions on share transfers.** The Grantor may want to place restrictions on the transfer or change of shareholding in the Developer. The Grantor may want to disallow any transfer (direct or indirect) until a certain point in time after completion of construction (a lock-up period)121, a right of approval over the identity of any transferee, and/or to maintain some guarantee from the original shareholders.

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120 For further discussion of the transfer of technology and know-how, see UNIDO (1996) supra note 85 at 75-90.

121 There are a number of PPP agreements that include a lock-up period. For example in England and Wales the ‘undertaker/operator licenses’ had a provision for a golden share that granted the government a veto right on any change in shareholding structure. Mendoza Argentina, Tallinn Estonia and Sofia Bulgaria all included in their respective PPP agreements restrictions on changes in shareholding to the Developer within the first five years of operation.
• **Grantor step-in/continuous operation.** The Grantor may want the right to continue operation of the project where it terminates the concession agreement, sometimes referred to as the "right to continuous operation", to ensure continuous delivery of services.

• **Hand-back.** At the end of the concession period, the Grantor will either put the project out for re-tender or it will require the Developer to transfer the project assets to the Grantor or to a replacement Developer.

Financial Linkages

In every contractual arrangement, against each allocation of risks and responsibilities there is some flow of money. A similar diagram to the previous one, but illustrating financial linkages between the parties, is an extremely useful tool to obtain early understanding and agreement of key financial issues in a very direct manner. This is crucial for lenders and shareholders that will want assurance that their rights and obligations are protected within the PPP agreement.

**Figure 18: Typical Financial Linkages**

For complex contractual structures, such as for PPP contractual arrangements, the Term Sheet approach can help the Grantor ensure that key issues are systematically and comprehensively established, and agreed, before detailed contract drafting is carried out. As a preparatory step the Grantor or its advisers prepares a Term Sheet for each contract or agreement, briefly summarizing the key issues to be covered in the document. The main advantages of this approach are that issues and contractual principles are sorted out at an early stage, and the detailed drafting of the PPP agreement and other related agreements is carried out with more certainty, thus reducing the need for later detailed revision. This approach is also beneficial for establishing supporting documents, such as the operational and technical annexes.
Our analysis of existing concession contracts has suggested a draft heads of agreement as shown in Table 1. This table also shows which of the provisions in the heads of agreement we discuss later in this report.

Table 9: Typical Heads of Agreement of a typical PPP Agreement\textsuperscript{122}

<table>
<thead>
<tr>
<th>Section in Heads of Agreement</th>
<th>Where it is discussed in this chapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Definitions</td>
<td>Not discussed</td>
</tr>
<tr>
<td>2. General Provisions</td>
<td>Section 10.3</td>
</tr>
<tr>
<td>3. Conditions precedent</td>
<td>Section 10.3</td>
</tr>
<tr>
<td>4. Grant of concession</td>
<td>Partially discussed in Section 10.3</td>
</tr>
<tr>
<td>5. Duration of concession</td>
<td>Partially discussed in Section 10.3</td>
</tr>
<tr>
<td>6. Transitional arrangements</td>
<td>Partially discussed in Section 10.3</td>
</tr>
<tr>
<td>7. Representations and warranties</td>
<td>Not discussed</td>
</tr>
<tr>
<td>8. Service obligations</td>
<td>Section 10.3</td>
</tr>
<tr>
<td>9. Other obligations</td>
<td></td>
</tr>
<tr>
<td>a. Labour issues</td>
<td>Section 10.11</td>
</tr>
<tr>
<td>b. Taxes</td>
<td>Not discussed</td>
</tr>
<tr>
<td>c. Concession fee</td>
<td>Not discussed</td>
</tr>
<tr>
<td>d. Asset use and transfer</td>
<td>Section 10.10</td>
</tr>
<tr>
<td>e. Disconnections</td>
<td>Not discussed</td>
</tr>
<tr>
<td>f. Insurance</td>
<td>Not discussed</td>
</tr>
<tr>
<td>g. Compliance with laws</td>
<td>Section 10.4</td>
</tr>
<tr>
<td>h. Performance bond</td>
<td>Section 10.4</td>
</tr>
<tr>
<td>i. Procurement</td>
<td>Not discussed</td>
</tr>
<tr>
<td>j. Minimum equity</td>
<td>See section 10.2 and chapter on funding and finance</td>
</tr>
<tr>
<td>k. Developer debt</td>
<td>See chapter on funding and finance</td>
</tr>
<tr>
<td>l. Existing projects</td>
<td>Not discussed</td>
</tr>
<tr>
<td>m. Technical submission</td>
<td>Partially discussed under Section 10.3</td>
</tr>
<tr>
<td>n. New assets</td>
<td>Section 10.6</td>
</tr>
<tr>
<td>10. Tariffs and indexation</td>
<td>Section 11.4</td>
</tr>
<tr>
<td>11. Periodic and extraordinary tariff adjustments</td>
<td>Section 11.2</td>
</tr>
<tr>
<td>12. Reporting requirements</td>
<td>Section 10.5</td>
</tr>
</tbody>
</table>

\textsuperscript{122} For those items where it says ‘Not discussed’ it means that the particular topic does not include a specific provision that has been included in this section. However, it does not imply that this issue has not been discussed throughout this research. For example, the category called Employee Matters is a major risk issue in developing PPP agreements in that the associated liabilities in terms of staff, (over staffing is typical in water and wastewater utilities that are publically owned), pension liabilities and other associated contingent liabilities are crucial in the development of a PPP scheme. This topic is discussed in earlier chapters.
10.3 General Provisions

Under the general provisions of the PPP agreement, there must be clarity as to the status of water and wastewater PPP project and the legal basis on which it will be established\(^{123}\). The contract starts by establishing the details of the parties to the contract, including:

- Rights and obligations of each party to the PPP agreement i.e. the Developer and the Grantor
- Term of the Agreement sets out the date that the PPP agreement becomes effective, and defines the term of the contract (e.g., 30 years) with the mechanism for agreeing any change in duration
- Start of the PPP Agreement or commencement date in order to distinguish the time (if any) from the signing of the PPP agreement to the moment in which the services or actions detailed under the PPP agreement will start in earnest i.e., that the PPP agreement becomes effective\(^{124}\).
- Transfer of Rights and Obligations, Authorized Body and Mandatory Requirements to the Developer. Although the Developer will generally be required to work within local laws, norms and standards, this section is used to detail specific covenants made by the Developer both on his status and ability to carry out the contract, that he has carried out his part in establishing all necessary legal and contractual arrangements and has obtained any necessary approvals to allow him to enter into the contract.
- Compliance by the Developer and any subcontractors with the lawful demands by public authorities.

Under a concession type of PPP scheme, the assumption is that the design, construction, integration, testing, commissioning, operation, maintenance and ultimate performance of any asset developed by the Developer should be the Developer’s responsibility. Accordingly, as a general principle it should be the Developer’s risk whether the design meets the Grantor’s requirements.

The Grantor’s role after the signature of the PPP agreement and prior to the services being effective should be clearly specified to include at least:

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\(^{123}\) Depending on the legal tradition of a country, in some instances the subject of the water PPP contract is described.

\(^{124}\) Conditions that must be met by both parties before the contract becomes effective or external conditions that must be met are usually detailed as Effective Date Undertakings or as Conditions Precedent to the effectiveness of the contract and are typically detailed in an annex.
• Review and as appropriate comment on the Developer’s plans for achieving the level of service outputs and as appropriate any specific capital special capital program
• Defines right of access to and use of the water resources, land etc. and Grantor the support to the Developer in obtaining necessary permits and licenses.

**Conditions Precedent, Effective Date and Financing Agreements**

Conditions Precedent (CP) are in essence a summary of the issues that need to be completed prior to the PPP agreement becoming effective on the Effective Date. The Effective date is when the CPs are met and part of meeting the CPs would be the signature of the financing agreements. These financing agreements are the agreements which the Developer (including any associated companies) enters into for the financing of the agreement. CPs are often a checklist of tasks or documents that need to done and depending on the legal regime in which the PPP agreement is set will be part of the agreement itself or not.

**Parent company guarantees and minimum equity requirements**

It has been common to require that parent companies guarantee the performance of the company holding the PPP agreement, or that the Developer has at least a specified minimum level of equity. Minimum equity, performance bonds and (limited sum) parent company guarantees are different tools to achieve the same objective. It is good practice to ensure that the concession company has enough equity or parent company guarantees to remain viable even if things do not go as expected (Ehrhardt and Irwin 2004). The Grantor should determine the total sum which it expects to be placed at risk, and then allow Developer’s flexibility as to which of these mechanisms they use, so long as the total amount at risk is at least equal to the specified minimum.

**Provisions related to Construction and Assets**

Conditions related to the construction should set out issues such as conditions precedent for the commencement of construction, the timetable and plan to which the Developer is committed to perform the construction (including specific milestones as may be appropriate), as well as the General Construction requirement setting out the Contractors and Sub-Contractor. In this respect, it will be necessary to detail as appropriate, the nominated subcontractors.

Typically under long term PPP agreement the spirit of the contract should allow flexibility to the Developer to design and implement its own construction program to meet the pre-agreed levels of service. Notwithstanding this, it is important that the PPP agreement should allow for a procedure for:

• The Developer to regularly inform about its capital investment program and other relevant information to the Grantor
• The Grantor should retain some flexibility to require some minor modifications that do not have an impact with the proposed cost or service that is being proposed by the Developer
• The maximum allowable time for any comments that are to be reasonably made by the grantor (if any)

It must be noted however that the Grantor should be wary of taking on too great of an overseeing role. The Developer should be granted the freedom to manage the project without
interference from the Grantor. Issues related to compliance with Health and Safety standards including documentation and procedural requirements to be followed should be included.

Acceptance of the infrastructure constructed: Notably, the PPP agreement needs to specify who is responsible for assessing satisfaction of the test. As a general rule it is advisable that this be done by a joint assessment between the Grantor and the Developer. Better still, and in order to minimize any potential disputes, the test could be undertaken by an independent third party or Expert Panel125.

Early Works Agreements: In most cases, Early Works Agreements are considered bad practice for the following reasons:

a. They may generate questions over whether the agreements have been procured in accordance with procurement laws and regulations;
b. Under ordinary circumstances the contracting authorities would not make any payments to the Developer or sub-contractors prior to the completion of the relevant facilities and commencement;
c. Under ordinary circumstances, contracting authorities should not be obligated to make any payments prior to financial close.
d. Reaching agreements on early works contracts can act as a distraction from the negotiations on the main contract and delay contract closing.
e. They can lead to project integration issues.
f. Early works agreements can alter the balance of risk on the procurement by altering the bargaining position of the Grantor;

In the cases where early works agreements are required, the following rules should be applied (United Kingdom HM Treasury 2004):

a. The enabling works should be planned in advance and be incorporated as part of the procurement strategy;
b. A decision should be made as to who should perform the works – whether the Developer should do so or whether the Grantor should commission a third party to do them;
c. The works program should deliver time-savings and provide value for money;
d. Only essential and necessary works should form part of the enabling works. This means works which are not specifically related to the Developer’s project plans but would be of general use to the Grantor whether a contract is signed or not– this can include surveys, access roads or other pre-construction enabling works;
e. The enabling works should not affect the risk allocation of post contract work;
f. The costs of the works should be controlled and the Grantor should designate funds for this purpose.

125 It is important to note that the Grantor should not allow for the third parties appointed by the lenders to act as their third party, as the adviser appointed by the lenders will not have the same overall objectives as the grantor. The Grantor should appoint a fully independent third party acceptable to it and the Operator.
10.4 Provisions Related to Service Standards and other Obligations

The PPP agreement needs to specify the actual services that the Grantor expects to be delivered under the PPP agreement. Some contracts have failed in this basic premise as there is often difficulty in reaching a consensus as to the baseline against which to measure service improvements (see Chapter 11 for more on imperfect data problems). Furthermore, the Service Standards themselves may not be well specified. For example, important dimensions of service may be omitted, or targets may not be disaggregated by geographic area, even though needs and services may vary widely between areas. Finally, in some instances there have not always been clear and sensible links between the Developer's remuneration and its achievement of the service standards.

In drafting the provision for service standards, it is generally accepted as useful for the contract to provide standards covering all aspects of service which are relevant to customers and potential customers. These include, for water:

- Coverage of households or other potential customer bases
- Water quality
- Water pressure and reliability of pressure
- Customer service response times

For wastewater service key standards include:

- Coverage of households and other potential customer bases
- Service quality and reliability (frequency of sewage backups and overflows or frequency of collection of sewage from holding tanks)
- Customer service response times
- Level of treatment and quality of outflows of treatment plants to the environment

In some instances it may be advisable to specify such standards for discrete geographic areas, rather than for the PPP scheme as a whole. This can guard against particular areas being ‘left behind’, and ensure that the benefits of expanded and improved service are widely felt. It also allows for differential standards to be set based on characteristics of different areas. For example, service standards (and tariffs) may be lower in low income or hard to serve areas. In all cases, service standards should be set taking into account customers’ willingness to pay for the service. My recommendation is that the PPP agreement should allow for:

- The definition of each service standard indicators including water quality, water pressure, continuity of service, coverage, water billed as a percentage of water produced and customer service levels
- The level of service to be attained, for each customer category and area
- The date by which the standard is to be met – the opening value of the service standard should be the level currently being achieved by the utility, with a realistic timetable set for improvements
- How compliance is to be measured and monitored

In some instances this may imply that the PPP agreement will specify service levels which are lower a desired standard for example European Union, United States standards, or World Health Organization guidelines.
• Events which excuse compliance
• Sanctions in the event of non-compliance.

Box 8: Linking Tariff Adjustments to Service Improvements – The Case of Bucharest

The Bucharest concession used an innovative approach to provide incentives for achieving service targets. The contract has a specific schedule of service targets that the Developer is expected to achieve at different points during the term of the concession. The Developer is given direct monetary incentives in the form of tariff increases and penalties linked to achieving these targets.

Level of services indicators include: potable water quality, pressure, continuity, coverage, billing, and other customer service indicators. Targets for these indicators were set for years 2, 3, 5, 10 and 15 of the contract. Each target is assigned a weight; for example, achieving the potable water service target in year 5 is worth 23% of the targets for that year. The Developer was required to indicate in its offer the tariff increases (i.e. difference between bid tariffs for two consecutive target years) that it would expect to receive for achieving the service targets. Upon achieving the service targets for a particular year, or a portion of them, the Developer is granted the corresponding tariff increase, or the corresponding portion depending on the targets achieved and the weights assigned to them.

In the event the Developer failed to achieve a level of service target by the deadline set in the contract, its corresponding level of service tariff adjustment will be delayed until the target is met. If the target is not met within 3 months after a failure notification by the technical regulator, the Developer will be required to pay US$1.5 million for each target that it failed to achieve. The contract makes a distinction between limited and general failures. The Developer is required to monitor its performance against level of service targets, and to inform the technical regulator when a penalty is due. The Developer will be subject to additional penalties if it fails to comply with this provision.

I recommend that the PPP agreement require the services to be provided but not specify the technology to be used. An example of good drafting of service standard provisions is provided by the Bucharest contract\textsuperscript{127}. Poirier (2004) argues that this is especially important for services to low income areas, where innovative technologies may be required. For example, the contract might provide that service is to extended to a specified number of households in defined areas, and that this service is to provide people with at least 40 litres of water per day, at no more than 50 meters from the house, with water available at least 12 hours per day.

10.5 Provisions Applying to Implementation, Monitoring and Enforcement

PPP agreements are fundamentally contracts that at their core set out service obligations. As has been discussed earlier my premise is that the contractual obligations need to focus on achievement of levels of service, customer focus and be based on monitoring of outputs and not necessarily inputs. Parting from that philosophical perspective, it is nevertheless essential to design the PPP agreement in such a way so as to provide the mechanisms which give the Developer the incentive to undertake its obligations, ensures it actually undertakes what it is contractually obliged to do, and that there are sufficient disincentives if it fails to fulfil its obligations. The following sub-sections discuss problems that have arisen in each of these areas, and recommend improved contractual approaches.

Monitoring and Contract Monitoring Units

Typically PPP agreements set out service standards and other targets which the Developer must meet and define who is responsible for monitoring such obligations. Monitoring and enforcement of obligations within the PPP agreement should be directly linked to the institutional capacity of the given country within which the PPP agreement is to take place. It is usual to charge a government agency (as in Port Vila, Vanuatu or Tallinn, Estonia) or a regulatory body (as in Manila, Sofia or Bucharest) with monitoring the service standards. However care must be taken by the Grantor in designing such arrangements to ensure that the entities tasked with undertaking such monitoring and enforcement are able and motivated to do so.

The research undertaken, seems to suggest that in some instances there is insufficient clarity about the procedures for auditing reports received from the Developer, that the Grantor agency may not be motivated or competent to carry out the monitoring, or that monitoring may be done ‘behind closed doors’, leaving the public uncertain and suspicious as to the Developer’s performance. In this respect, my recommendations for improved contractual drafting should allow for:

- Defining service standards and tariff rules clearly in the PPP agreement

\textsuperscript{127} Although the concept of level of service attainment tariff adjustments is an innovative one, and could provide direct and strong incentives to the Developer, this did not work well in practice in the PPP scheme in Bucharest. The winning bidder offered a declining bid tariff schedule, therefore removing most of the incentive to achieve level of service targets. This shows the importance of a careful design and consultation on such provisions. To work well and be publicly acceptable, the increased tariffs need to be planned and expressed as being designed to ensure the sustainability of the service improvements.
• Specifying the Grantor agency who is responsible for receiving information from the Developer, detailing the format and content of each report, how each standard is to be monitored, and requiring the Developer to report on these standards at regular and specified intervals.\textsuperscript{128}

• Providing for the Grantor agency to check the accuracy of the reports through some audit process and requiring it to validate Developer reported performance against standards

• Allowing the Grantor agency to take specific enforcement actions when performance falls short of standards

• Making the standards and actual performance of the Developer available to the public at large.\textsuperscript{129}

My recommendation is that the above aspects of good monitoring may be contracted out to an independent contract monitoring unit. This is discussed in the next section.

Contract Monitoring Units can be an effective way of undertaking monitoring of contractual obligations, as was the case of Sofia, Bulgaria. Contracting out monitoring of performance to an independent, reputable, international firm is one of the main recommendations in this chapter. Under this model, the regular reporting of service performance by the Developer would be made to the contracted monitoring unit. The unit would check the accuracy of the report. It would then report to government on the extent to which the Developer met the standards, and recommend enforcement action where it appears standards are not being complied with. The reports of the monitoring unit would be public. It is also recommended that customer groups are involved in monitoring performance. For example, this may include creating a group of customer representatives, and providing in the PPP agreement for this group to have a mandate to check on service levels compared to standards, as an input to the monitoring process carried out by the firm or agency charged with monitoring. It may also be a good idea to provide explicitly for monitoring of the contracting authorities performance against its obligations.

**Penalties and Grantor ability to intervene for persistent minor breaches**

Given the long term nature of water and wastewater PPP agreements, it is necessary to allow for situations where persistent breaches by the Developer occur but that by themselves do not justify termination of the agreement. The introduction of a persistent minor clause allows for a specific mechanism for remedy by the Grantor. It allows for deductions or financial penalties, but in the event these are insufficient consideration should be given to the use of warning notices with pre-defined resolutions procedures with the ultimate sanction to a right to early

\textsuperscript{128} For example, in the Manila concession contracts the Developers must report quarterly on service performance indicators such as coverage, quality standards, and customer service data.

\textsuperscript{129} During the course of this research a number of international water and wastewater operators were contacted and the issue of making information about performance available to the public was discussed. It is interesting to note that there was consensus that information pertaining to performance of the PPP agreement should be made available to the public. There was an element of discomfort for full disclosure of financial information. The argument being made was that Developers did not want to ‘open their books’ to other operations as this was considered sensitive commercial information that could be used by competitors or even Grantor’s for other purposes than that of monitoring. Having worked for a private international water and wastewater operator (and in fact one of the companies contacted was my former employer) I have heard this same argument being made by my senior management at the time.
termination. Clearly, such arrangement needs to go hand-in-hand with specific penalties if the service standards are not met.

It is accepted good practice to specify penalties for all breaches of the contract, with the penalty proportionate to the harm done by the breach. Care must be taken to ensure that the inclusion of such penalties is allowable. For example, in common law countries it may not be possible to including penalties within the PPP agreement itself. Penalties may have to be introduced as for example liquidated damages, or including penalties in specific regulations. Research also shows that it is advisable to cap the level of penalties the Developer would be liable for as a result of any specific incident or over any given period and to allow for a procedure for expedited resolution in the event of disagreement about the application of a penalty. The cap should be set at a level which is high enough to provide the Developer with a strong incentive to perform, but low enough to protect the Developer from financial distress caused by penalties (Operators Roundtable, World Bank 2004). Additionally, and in the interest of equitable treatment of parties to the PPP agreement - sanctions also need to be provided against contracting authority non-performance. The form of such penalties may be a direct penalties or set-off rights as discussed below.

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130 It must noted that this is not a remedy that is normally used in this sector. However, there are positive experiences of this in other infrastructure sector eg public transport services in the UK and the UK’s Private Finance Initiative procedures (HM Treasury, 2008).

131 A good example is the provisions of the Port Vila, Vanuatu concession contract. This involves a monetary penalty for the Developer for any instance where it fails to fulfil its obligations. The monetary penalty for any failure is then found by taking the prevailing volumetric tariff multiplied by the appropriate multiplier. For a particular failure for example interrupted supply or insufficient water pressure, a specific number of cubic meters is pre-specified as a multiplier. As service standards will be clearly defined in the contract, it was envisioned that this approach will enable penalties to be easily determined when such standards are breached.

132 The Guayaquil, Ecuador PPP agreement specifies that any breach of the “Reglamento de Servicios” (operational rules) which governs the relationship and interface between the Developer and the customers is liable to a fine of US$5000 per event. The PPP agreement is silent on the manner in which such sanction can be imposed. So for example, not responding to a customer call could be considered a customer complaint by the Regulator, and a fine could be imposed. There are no provisions defining what a customer complaint is nor allowances for a period in which the Developer could respond to such customer complaint. This demonstrates a failure in the design of the PPP agreement in that a fairly ‘reasonable’ clause stating that the Developer may be fined US$5000 for “failures to perform its obligations under the terms of the concession” can have a cumulative effect that could potentially lead to the Developer being faced with multi-million dollar fines imposed on it for not responding to customer calls. The problem was not was there was no cap associated with such provision nor was there a mechanism within the PPP agreement that allowed the Developer to disagree with such penalty application. The result was that the Developer had a contractual obligation to pay the fine or else he would be in breach of his contractual obligations. His only legal recourse was to avail itself of the arbitration provisions in the PPP agreement, a procedure it was loath to initiate as it would put him in direct ‘conflict’ with the Grantor.

133 Where there is a dispute as to whether or not a service standard has been breached, the penalty would not be applied until a final legal determination on the matter had been reached. Although a provision like this may be advisable, care must be exercised to avoid nullifying the effect of the penalty provision. What is meant by this is that the provisions of the PPP agreement must not allow the Developer to shield itself and unduly delay the application of a given penalty until there is a legal determination on the matter. That is why it is recommended that the PPP agreement includes a procedure(s) that allows for an expeditious resolution on this. If the parties cannot agree than the other dispute resolution procedures contained within the PPP agreement would apply.

134 Arguably a provision like this may have helped in the case of Guayaquil, where the Regulator ECAPAG had too much discretion. This is a personal opinion based on my assessment of the situation when I was employed as a mediator for a dispute between the Interagua and ECAPAG between 2004 and 2005.
Performance Bonds and Set-off rights

Research suggests that the use of Performance bonds is a well used technique for PPP schemes in infrastructure development projects. The reason is due to the ‘limited recourse’ nature of project finance (as previously discussed in Chapter 7). The water and wastewater sector is no exception. Many contracts have included performance bonds posted by the Developer.

A performance bond is an amount of money lodged with a neutral third party, such as a bank or financial institution, which the Grantor may claim in the even the Developer breaches pre-specified obligations detailed in the PPP agreement. The bond ensures the Developer faces a penalty for non-performance, and that a sanction can be imposed. Without a performance bond, the public authority might need to sue the Developer for non-performance, which can be costly and time-consuming, and even if the court finds in the public authority’s favour, it might be difficult to actually make the Developer pay.

It is good practice to include performance bonds in contracts. However, problems have arisen – for example in Guayaquil (see Box 10) – that the conditions under which the bond may be called are not well defined, creating risk. A related problem has been “first-demand” bonds – those which are callable without the public authority having to show that the Developer has defaulted. The idea of “first-demand” bonds is to protect the public authority by avoiding delays and litigation when the public authority believes the Developer has defaulted. However, they have in some cases unbalanced relationships by putting in the public authority’s hand a substantial sanction which it can exercise at will.

Emerging options to improve practice include:

- Avoiding “first demand” bonds, and instead including a provision that the bond may be called when the independent monitoring unit certifies that relevant breach has occurred
- Making lodging of performance bonds reciprocal. In many cases the Developer is required to post a bond to protect the government from risky behaviour, but not vice versa. Where the Developer is required to lodge a bond to ensure it meets its obligations, the government should also lodge a bond for its obligations.

Box 9: Covering the Risk of Wrongful Call of Performance Bonds – Guayaquil

The Guayaquil concession contract required the concessionaire to issue a US$10 million performance bond in favor of the Grantor to cover its performance obligations. The bond could be called to cover payments due to the contracting authority over damages to third parties, unpaid penalties or early termination, as well as unpaid renewal of insurance policies. Beyond these traditional trigger events, the bond also covered the obligation of the Developer to make the capital investments in the amounts offered in its bid. The Developer felt that this was a harsh requirement, and that there was a significant risk that the contracting authority would wrongfully call the occurrence of this event. To protect itself against this risk, the Developer requested a counter-guarantee from MIGA to cover a wrongful call of the performance bond. This was the first guarantee that MIGA provided to a water sector transaction. The US$18 million guarantee covered risks of expropriation, war and civil disturbance, and notably, wrongful call of the Developer’s performance bond.

Source: Interview with Interagua (Dr Geoffrey Thorpe) and MIGA, and PricewaterhouseCoopers Securities LLC, IFI Risk Mitigation Instruments and Direct Sub-Sovereign Lending, Final Report, 2004

135 Performance bonds have been used extensively in the water and wastewater sector. For example, of the contracts analysed for this research Guayaquil, Manila, Sofia, Estonia, Trinidad and Tobago, Port Vila amongst others all had performance bonds linked to their respective PPP agreement.
• Using set-off rights which would allow the Developer to unilaterally adjust cash payments, service obligations and any investment roll-out if the Grantor breaches the PPP agreement in ways which increase the Developer’s cost or reduce its revenue. Similarly, the government should be able to withhold payment of any fees payable to the Developer to set-off any money owed by the Developer. If either party is unhappy with such an adjustment, the process of dispute resolution (outlined below) should be followed.

My proposal is that these measures are practical and pragmatic solutions that go at the core of any PPP agreement ie that the fact that a party has a right to something does not in itself allow it to exercise that right, and that if one party is in breach it should not excuse the other party from performing its obligations\textsuperscript{136}. By avoiding on demand performance bonds, making performance bonds reciprocal (ie both the Grantor and the Developer are obliged to post a bond) and by allowing “rights of set-off” in the contract, there will be (a) less likelihood for unilateral actions by the Grantor, (b) an automatic compensatory mechanism that allows the Developer to unilaterally adjust cash payments, service obligations and any investment roll-out if the Grantor breaches the PPP agreement in ways which increase the Developer’s cost or reduce its revenue.

\textbf{Enforcement of customer payments}

A Developer cannot be financially viable if it cannot collect payment for customers. This means it needs a way to sanction non-payers. Disconnection is the most effective tool. It is accepted practice that Developers should have available all the normal sanctions against customers who do not pay, including the ability to disconnect after a specified period. Developers may be required to report on the number of disconnections, but should not be required to report in advance of disconnection, or to seek approval to disconnect. However, this needs to be balanced against ensuring that there are mechanisms to protect consumers which may include for example, a requirement that in cases where a customer disputes the bill, he has the right to take the issue to an independent body, and service must not be disconnected until the dispute has been settled, or that the Developer is obliged to offer reasonable terms for settlement of payment arrears. Another possible suggestion is that the Grantor set up a fund which has the discretion to pay water bills on behalf of families in genuine hardship, and which can work with them to provide budgeting and other assistance. Such a fund and agency would recognize the role of the government in social assistance, allowing the Developer to focus on commercial performance.

\textbf{10.6 Provisions Applying to Financing}

\textbf{Financing- Developer obligations}

Financing is provided by the lenders and the shareholders. Financing will include up-front fees, development costs, design, construction and ultimately operation. Lenders will advance funding progressively with payments usually linked to milestones and verified by an independent expert acting for the lenders and possibly the grantor. During this first phase, the lenders will insist on a careful balance of equity and debt funding and may require recourse beyond project assets, to the shareholders or some other guarantor. The lending agreements will need to set out protections for the lenders, such as:

\textsuperscript{136} For example, in Manila the government did not build a new water source it had promised, but the Developers were still legally required to provide the level of coverage and service they had committed to. In some African contracts, for example the lease contract in Dar es Salaam Tanzania, government agencies have not paid their bills, leaving the Developer in a difficult financial position, but the Developer is still expected to deliver the contracted levels of service. In Buenos Aires the Grantor did not allow tariffs to increase as the peso depreciated, as the contract required, but the Developer was still contractually bound to make investments and expand service, even though government action meant it did not have the money to do so.
• Drawdown schedule and the conditions precedent that must be satisfied before each drawdown, in particular related to completion of construction milestones and aggregate paid-up equity

• Repayment schedule

• Funding and control of reserve accounts, where the project company must set aside money for contingencies, in particular to cover a number of months of debt service in the event of revenue shortfall, periodic major maintenance expenses and annual costs like insurance and taxes

• Events of default, such as failure to satisfy ratios (DSCR, LLCR, debt: equity, etc.), late payment, defaults under project contracts, making changes in management or project contracts without consent; and

• The right for lenders to stop disbursements to the shareholders, control voting rights and other project company discretions (“reserved discretions”) and seize funds in the event that things are not going as well as the lenders would like (eg where events of default arise or might arise).

**Security, step-in rights and direct agreements**

Security rights (over different project assets and in favour of creditors) are both "offensive" and "defensive": offensive to the extent the lenders can enforce the security to dispose of assets and repay debt where the project fails; defensive to the extent that senior security can protect the lenders from actions of unsecured or junior creditors. If comprehensive security rights are not available, the lenders may seek to use ring-fencing covenants in an effort to restrict other liabilities, security over project company shares to allow the lenders to take over control of the company or the creation of a special golden share that provides the lenders with control in the event of default. Security rights may also allow the lenders to take over the project rather than just sell the project assets, since the value of the project lies in its operation and not in completed assets (Delmon 2009).

The lenders and the grantor may enter into direct agreements with the project participants setting out step in rights, notice requirements, cure periods and other issues intended to maintain the continuity of the project where the project company defaults and/or falls away. A project may not require direct agreements where provisions can be included in the relevant project document or where some other solution is available.

**Exchange Rate Issues**

From the contracts analysed it would appear that there is no real best practice for drafting exchange rate risk provisions. Generally this is dealt with by a combination of indexation, review, financing and enforcement provisions. As explained in the risk chapter, exchange rate risk can have a significant effect on the ability to attract private finance. Accordingly, there are a number of possible contractual mechanisms which may help to manage foreign exchange rate risk and include:137

• **Mandated local currency financing** can eliminate the mismatch between a project’s revenues denominated in local currency and its debt being denominated in foreign currency. The disadvantage is that the amount and duration of local finance will be poor (or not

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137 Interview with Ms Tomoko Matsukawa, Senior Investment Officer, Finance Economics and Urban, Sustainable Development Vice-presidency, World Bank (April 2009)
available) in many markets. Another factor is that even if local finance is available tenors are usually too short making it impractical or too costly. Nevertheless, Gray and Irwin (2003) suggest that, while reducing the reliance on foreign currency debt may initially lower the amount of finance available, in the long-run there will be benefits in terms of longer-lived and more robust investments.

- **Mandated hedging** to help mitigate exchange rate risk by requiring the Developer to take out compulsory hedge contracts (as discussed in Chapter 7). In this way, a Developer could purchase the foreign currency requirements for debt servicing at a fixed forward exchange rate. Like local currency financing, this approach is hard to implement due to lack of depth and tenor in local currency hedge markets. However, there may be cases where local currency financing and hedging instruments will be available, and in such cases it will usually be a good idea to use these instruments so far as possible.

- **IFI local currency swaps**: The Asian Development Bank has initiated a new instrument in which it swaps a given amount in US dollars for the local currency in a country (Bestani and Sagar 2004). The IFI then on-lends the local currency to financial institutions in that country, which in-turn lend to borrowers for investment projects. This provides the benefits of local currency financing. The difficulty, however, is that the government of the country, by making the local currency swap, takes on a large portion of the exchange rate risk.

- **Liquidity backstopping facility**: Another approach is to use a devaluation liquidity backstopping facility, as proposed in the Camdessus report (2003), which would be provided by an international agency with an excellent credit rating, which would pay foreign lenders the part of the Developer’s debt servicing due to devaluation of the local currency. This requires the establishment of an “affordable exchange rate”, above which the facility would intervene to repay foreign debt. The repayments made by the facility then become a loan from the facility to the government. This loan is repaid over a long time period by way of an additional surcharge added to tariffs. However, since 2003, as far as I am aware from the research undertaken, there has not been another project – other than the Tietê power project in Brazil – where a similar structure has been used. Given the current financial conditions it is not clear if this proposed structure will be commercially feasible for financial institutions to take the risk involved in backing such a facility.

<table>
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<tr>
<th>Box 10: Liquidity Backstopping Facility in Tietê power project in Brazil</th>
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A similar type of facility was used for the Tietê power project in Brazil. In this case, the operator raised finance for the project by issuing U.S. dollar bonds. Tariffs from the project are indexed to local inflation but not to changes in the exchange rate. If the operator is unable to meet its debt repayments, it may draw on a liquidity facility provided by the U.S. Overseas Private Investment Corporation. In the long-run, this is repaid from cash that would otherwise have been paid to shareholders.

Source: Gray and Irwin (2003)

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138 Matsukawa et al. (2003, p.10) argues that in lower-middle and low income countries it is unlikely that forward foreign exchange transactions could be arranged at an affordable cost with sufficient tenor to serve as the basis for financing an infrastructure project. As a practical matter, forward foreign exchange transactions have not been used to finance infrastructure projects in developing or developed countries.
10.7 Provisions related to Force Majeure & Termination

Each party to an arrangement intends to work towards fulfilling the terms and completing the contract until its expiration date. Provisions for early termination of the PPP agreement should be dealt with within the arrangement. The lenders of the Developer will require that the agreement detail precisely what compensation is payable if the arrangement is terminated early\(^\text{139}\). The key consideration for contracting authorities is to ensure the Developer is motivated to achieve optimum performance and should not be motivated to deliver a substandard performance because the financial penalties are not sufficient enough to motivate it to remedy the problem. A compromise should be found that meets both expectations. The cause of termination will determine the level of compensation to be granted. Additionally, a compromise will need to be found over definitions of persistent breaches and the list of grounds for termination as well as the definition of Force Majeure. The Grantor should be careful of not making the termination triggers too stringent as they are unlikely to be accepted by the Developer or its lenders.

My research shows that the main causes for early termination include\(^\text{140}\):

- **Grantor Default**: The Developer should be granted the right to terminate the arrangement where the Grantor or the government conducts itself in a way that compromises the contractual relationship and makes service provision so impractical or impossible\(^\text{141}\). This should be a last resort and provisions should be made to allow the contracting authorities or government to rectify its actions before triggering a termination. Compensation should be calculated on the basis that the Developer and its financiers are fully compensated i.e. no better or worse off than if the arrangement was continuing as expected.

- **Developer Default**: The Grantor may seek to terminate the agreement due to inadequate service provision. A balance must be found between the effect of early termination due to inadequate service provision and the Developer’s and financiers’ interest in ensuring termination only occurs after severe defaults, after all possible attempts at rectification have been made and all other options have been exhausted. To counteract this eventuality, the Grantor can incentivize the Developer to deal with persistent performance breaches. I recommend that the PPP agreement should include a performance points system with respect to all defaults with a right to terminate the contract if a certain threshold of points is reached. Where such a points system is not applicable, the Grantor should retain a right to terminate the contract for persistent breach if defaults are occurring without rectification. Warning procedures should be in place before termination procedures begin.

- **Corrupt Gifts and Fraud**: Termination can be triggered by instances of fraud or corrupt acts perpetrated by the Developer, sub-contractors or the Grantor. Careful consideration must be given to each party’s interests in handling issues of corruption.

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\(^{139}\) In some instances the maximum liability payable under a termination event is limited or uncertain in law leading to the project not being considered by lenders as bankable. In this case lenders are likely to require assurances for partial or full compensation in the event of early termination and in some cases even for termination due to the Operators’ breach.

\(^{140}\) For more detailed discussion on termination triggers and drafting of appropriate texts, readers are advised to consult the H.M.’s Treasury’s ‘Standardisation of PFI Contracts Vol. 4’ document.

\(^{141}\) For example, if the Operator requires visa for its foreign personnel to be in country and these visas are not granted by the Government (or the grantor) this would make it impossible for the Operator to meet its contractual obligations.
It is perfectly understandable for the Grantor to wish to distance itself from a corrupt agreement. I recommend that the Grantor may decide not to proceed immediately to terminating the agreement where the fraudulent act has been perpetrated by a subcontractor or by an employee acting on his own. The Developer should be given sufficient time to impose sanctions on the relevant party, terminate the relationship and locate alternative service providers. However, any form of corporate corruption should lead to immediate termination.

- Voluntary Termination by Grantor: Certain events can occur that make the agreement between the Grantor and the Developer untenable, forcing it to voluntarily terminate the agreement. Such events can include policy changes which make service provision redundant. The Developer should in these instances receive a termination payment which would ensure it remains in the position it would have been in had the PPP agreement been fulfilled.

- Authority Break Points: The Grantor may also structure the agreement to grant it the option to terminate the agreement on specified dates for a specified compensation amount for equity and junior debt. The degree of increased agreement flexibility for the Grantor provided by the authority break points will depend upon the extent to which the specified compensation amounts are less than the alternative amounts payable under voluntary termination by the authority circumstances.

- Termination for Breach of Refinancing Provisions: The agreement between the Grantor and the Developer should deal with the possibility of termination due to breaches of refinancing provisions. A balance must be struck between the Grantor’s need to incentivize the Developer to be open and honest with regards to its refinancing and the Senior Lender’s fear of threats to their loans due to actions by the Developer.

**Force Majeure**

My research reveals that the PPP agreement should have a detailed list of Force Majeure events that can trigger termination and the respective rights of each party should such a situation arise. Unfortunately, the definitions of force majeure, and the consequences, are not always clearly defined or well thought out. Different people have different interpretations of what force majeure means, so it is important for the PPP agreement to be clear on the matter. Generally it is accepted that force majeure refers to something which neither contractual party can control or mitigate, and which substantially affects the performance of the services. Basic principles suggest that if such an event arises and neither party can reach an agreement within a specified period (generally 6 months), each party has the right to terminate the contract. The Developer is entitled to compensation payments but the Grantor can attempt to prevent the termination request by continuing to pay the Developer as if the event had not occurred. The Grantor should define the time period for these payments after which it will review the situation.

Despite what would appear to be a fairly un-contentious issue, water and wastewater contracts appear to have run into difficulties with the definition of force majeure (FM) events. For example, the Grantor may want to include events which increase the cost of providing the service (such as a currency depreciation), or whether events which are foreseeable but uncontrollable should be included in the definition, or whether it should be limited to unforeseeable events.
My recommendation is to limit the FM provision to events which make performance of the service physically impossible. That is because I have recommended other provisions such as Termination for Breach of Refinancing Provisions, Emergency Adjustment, Grantor or Developer Default provisions to manage the financial consequences of unforeseen and uncontrollable events which have a major impact on the cost of service. Where events are foreseeable, I recommend including explicit contractual provisions to deal with them. If any event is not explicitly included in the contract, and is beyond the ability of either party to control or mitigate, I recommend that it be included in the definition of force majeure.

**Step-in Right**

At any time during the term of the contract, the Grantor should reserve the right to suspend the Developer’s rights under the PPP arrangement under specific circumstances: generally these include events of war and long periods of unavailability of service. Where it does step-in, the Grantor should also comply with performance criteria and be responsible for proper maintenance and operation of the system. The Developer will require compensation for any damage caused during a step-in period. If the step-in continues for a long period of time, the Developer will have the right to terminate the agreement. At the same time, the financiers of the project will undertake their own assessment of the project and will attempt to rectify any breaches which have led to termination. Financiers will not want to take significant risk before they have had the opportunity to assess the project and assess whether they can put together a substitute plan which could take over the project and rescue it. If the financiers confirm that a breach has been rectified, control over the project may be returned to the Developer. However, if the financiers decide that a permanent replacement for the Developer is required, they would then seek to find a suitable substitute to take over the rights and obligations of the Project. The Grantor should retain the right to approve the suitable substitute. The Substitute should be granted a ‘clean sheet’ in terms of pre-substitution termination defaults.

**Handover Provisions for Assets which Transfer to the Authority**

The methods for dealing with the transfer of the assets will need to be determined in the PPP agreement. The key areas to be determined are:

- The condition of the assets to be transferred, repairs required, costs and how they are paid for;
- Any design life requirement after the Expiry Date;
- Inspection tests prior to handover;
- Provision for warranties, contracts and other rights;
- Resolution of any disputes related to any of the above.

Employees are also regarded as assets and provisions should be made in the agreement as to how they are to be dealt with under a transfer to another Developer or to the Grantor.

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142 It is generally good practice to list all events which might constitute force majeure and state explicitly whether or not they are included in the definition. Earthquakes, floods, fires and military or terrorist action are generally included in such definition. Furthermore, the Developer may be required to maintain insurance against some or all of these risks. Other factors like industrial unrest may or may not be included, depending on the parties’ view of how much control the Developer has over such matters.

143 A step-in right is a right where the Grantor has the ability to take action under the PPP agreement.
Valuation of Terminal Payments on Expiry where Residual Value Risk has been transferred

The Grantor has two main options open to it for calculating payments with respect to assets with alternative uses at the end of the PPP agreement period:

- Using the market value of their assets in their existing use; and
- Using the amount bid by the Developer during negotiating of the original contract and indexing it during the life of the PPP agreement.

The market value of the assets is the most valid basis for determining terminal payments. But under the scenario of an extraordinary increase in the market value of critical assets (without which service availability would be compromised), a payment cap should be set to guard against excessive payments.

Calculation and Payment of Early Termination Liabilities

The principles applying to the calculation and payment of early termination payments are set out:

- Compensation Payment Amounts and Changes to Financing Agreements: Compensation payments where any of the above termination triggers are activated are calculated in whole or in part by reference to the level of the Developer’s senior debt at the time of the termination payment. The Grantor must ensure that senior debt outstanding at any time is not inflated and therefore will not increase the Grantor’s liability.

- Set-Off on Termination: The Grantor should be entitled to place any outstanding liabilities of the Developer against the amount it pays in compensation in a Developer default scenario. Where termination is triggered for reasons other than Developer default, the Grantor is entitled to place the outstanding liabilities of the Developer against all amounts it pays in compensation, except amounts paid to compensate senior debt.

- Method of Payment: Where an incoming Developer pays market value on Developer default termination, or the agreement is terminated due to Grantor default, the Grantor should pay the Developer by way of lump sum. Payment by installation should be avoided as interest will accrue on the compensation amount unless affordability constraints hinder this option.

Transition on Handover

a. Handover of water and wastewater system at end of PPP agreement or early termination.


c. Assignment of Assets & Stock

d. Retention of Assets by Contractor on Termination:

In situations where the Developer retains assets after termination, the value of the assets should be deducted from any compensation payments made. Where assets have no alternative use, their value will be approximately zero and therefore no contractual options are required. Assets with residual value must be carefully considered as the commercial incentives can be significant. For example, if residual values exceed original returns, they could distort the effect of any compensation agreement and reduce the Developer’s incentives to perform.
e. Information handover
f. Position of personnel

_Treatment of Assets on Expiry of Service Period_

There are two distinct types of contract approach which deal with how assets are handled upon expiry of the service period (HM Treasury, 2007):

a. Contracts where it represents value for money for the Grantor to take over the assets on expiry. Includes assets which have no other feasible alternative use and is only of value to the public sector entity.

b. Contracts where the residual value of the Assets is best transferred to the Developer. Such assets have alternative uses and are not required in the long term by the public sector. ‘Residual value; value refers to the market value of the assets associated with the contract at the time of agreement expiration. This is classified as a risk as the residual value of the assets is unknown at the time of signing the contract. Estimations of the value of assets will be made and this will be incorporated into the financing structure of the agreement.

The key allocation questions to be considered are:

a. Which party retains the assets on termination?

b. Do these assets have alternative uses?

c. How does this affect the termination payment (if any) payable by the Grantor?

The UK Government’s PFI Unit recommends that the contracting authorities long term objectives will be best served by requiring either automatic transfer or reversion of the assets to itself on the expiration of the agreement or at the very least, an option to purchase the assets at nominal cost. This is the case where legal constraints prevent any practical alternative option or when assets have a useful economic life if retained by the Grantor and conversion of the assets for other uses may be costly. The Grantor may also require the asset in order continue providing service.

The Grantor should protect itself by not reducing the options it has available at or just before the termination of a contract. These options include:

a. Taking possession of any assets at no cost;

b. Retendering the service provision with the outgoing Developer making any assets available to the Grantor at no cost; and

c. Removing any assets.

Where the Grantor retains the assets at no cost, considerations should be made as to the Developer’s obligations to deliver the assets in a serviceable condition. This does not apply if the assets have reached the end of their useful economic life. Importantly, the Grantor should use operational requirements as their modus operandi rather than attempting to generate residual value interest.

_Preserving the Conditions of the Assets on Expiry_

In the past, terminal payments related to the value of the assets at the end of the agreement, were used as an incentive mechanism for the Developer to maintain high standards of service throughout the contract period. However, this system is flawed in that it confuses payments for services and payments for asset transfer as the assets can be well maintained by the quality of service can be low.
Instead, the availability payment should be the main vehicle for incentivizing the Developer to maintain standards throughout the life of the agreement. If at the end of the contract there will be a re-tendering of the service, the Developer has further incentive to continue to meet the Grantor's service requirements.

An alternative means of incentivizing the Developer to maintain service standards where there is no alternative use for the asset would be to structure the agreement to grant the Grantor the option of a secondary contract with the Developer. The Grantor can exercise this secondary contract option at the end of the Expiry Date but this choice can be made after holding an open competition with other bidders. Under this system, the Developer is incentivized to maintain standards through to the Expiry Date without the need for terminal payment. The major difficulty with this approach is the difficulty in calculating the price for the secondary contract during the negotiations for the first contract.

### 10.8 Various Standard Contractual Issues

#### Transparency Provisions

Transparency in the PPP agreement is particularly important in relation to tariff indexation and adjustment procedures, because it helps protect against corruption and increases legitimacy and hence the likelihood that results are accepted by customers and other affected parties. My research reveals that most contracts do not provide for full disclosure and transparency in tariff-setting. The process usually involves only the Developer and the government or a regulator, without the opportunity for public scrutiny and input. My research shows that there are some 'good practice' options related to customer service standards and tariffs, which include allowing the public to have a right to ask questions, and to be heard, in periodic and other kinds of adjustments, as well as allowing Consumer representative groups to be involved in monitoring performance against service standards. Other important provisions to increase transparency could include for example, the making publicly available a Developer's determination of its estimated tariff increase, public hearings for any tariff increases and making the proceedings and findings of such tariff reviews public and in the event of dispute between the Grantor and the Developer making the result of such proceedings publicly available.

#### Intellectual property rights

In long term PPP agreements it will be necessary to explicitly set out what forms of Intellectual Property Rights (IPR) result from the agreement. In the event of expiry, early termination or authority step-in, agreement should be reached to ensure the Grantor has the

144 This has caused suspicion and reduced legitimacy in several long term PPP agreements such as Buenos Aires, Manila and Port Vila.

145 The precedent for this is in the United States and the tariff/rate cases and which has been successfully used in places such as Barbados.

146 Incorporating these provisions will enable customers to check for themselves that the Developer is not trying to put through an unwarranted tariff increase. They also ensure that the customers, being those directly affected by tariff increases, are able to make objections or general submissions on any proposed increases. An example of such transparency provisions is provided by the US rate of return regulation process, which allows public participation throughout the process. The New Jersey regulatory system does this.
right to use IPR required to continue provision of service. This is particularly important in the case of the water and wastewater sector where as part of the contractual obligations the Developer may be required to develop a customer database or commercial / billing system. In such circumstances the Grantor should be granted immediate access to IPR and any information required to operate the system. New service providers will also require access to IPR prior to expiry dates in order to familiarize itself with the service.

**Labour issues**

Although in the main PPP agreement this may not be very detailed, this is a crucial point in terms of liabilities, pension commitments etc and other associated issues for a successful PPP agreement. Typically in municipal water and wastewater services existing labour force is a major source of potential efficiency gains. Depending on the contract type over staffing and the manner in which this is dealt with may have major implications for the sustainability of the PPP agreement. It is recommended that if major labour issues are involved as part of the PPP agreement, the way in which staff issues are handled by the Developer are made explicit. For example this may include the level of compensation payable, pension contributions, the retrenchment numbers allowable over a period of time, outreach and post employment obligations etc.

### 10.9 Summary and Conclusions

PPP agreements in the water and wastewater sector are fundamentally contracts that at their core set out service obligations in terms of quality, quantity, management, operations and investments. As has been discussed earlier my premise is that the contractual obligations need to focus on achievement of levels of service, customer focus and be based on monitoring of outputs and not necessarily inputs. Parting from that philosophical perspective, it is nevertheless essential to design the PPP agreement in such a way so as to provide the mechanisms which give the Developer the incentive to undertake its obligations, ensures it actually undertakes what it is contractually obliged to do, and that there are sufficient disincentives if it fails to fulfil its obligations.

Contracting out monitoring of performance to an independent, reputable, international firm is one of the main recommendations in this chapter. Furthermore, it is recommended that monitoring and enforcement of PPP agreement can be improved by:

- Defining service standards and tariff rules clearly in the PPP agreement
- Specifying the Grantor agency who is responsible for receiving information from the Developer, detailing the format and content of each report, how each standard is to be monitored, and requiring the Developer to report on these standards at regular and specified intervals

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147 For example, the concession contract in Tucuman Argentina, the Developer (a French multinational water company) exited the contract in acrimonious terms with the Grantor and decided it would remove the commercial and billing systems of the company.

148 For example, in the Manila concession contracts the Developers must report quarterly on service performance indicators such as coverage, quality standards, and customer service data.
• Providing for the Grantor agency to check the accuracy of the reports through some audit process and requiring it to validate Developer reported performance against standards

• Allowing the Grantor agency to take specific enforcement actions when performance falls short of standards

• Making the standards and actual performance of the Developer available to the public at large

My recommendation is that the above aspects of good monitoring may be contracted out to an independent contract monitoring unit. My proposal is that these measures are practical and pragmatic solutions that go at the core of any PPP agreement ie that the fact that a party has a right to something does not in itself allow it to exercise that right, and that if one party is in breach it should not excuse the other party from performing its obligations. By avoiding on demand performance bonds, making performance bonds reciprocal (ie both the Grantor and the Developer are obliged to post a bond) and by allowing “rights of set-off” in the contract, there will be (a) less likelihood for unilateral actions by the Grantor, (b) an automatic compensatory mechanism that allows the Developer to unilaterally adjust cash payments, service obligations and any investment roll-out if the Grantor breaches the PPP agreement in ways which increase the Developer’s cost or reduce its revenue.

In this chapter I argue the importance of allowing for variations that take into account pass through and other cost items that are not in the control of the Developer. Additionally, there are certain costs associated with the financing structure of the PPP agreement that need to be included so as to provide for changes that cannot be foreseen. All these issues require a pragmatic solution to resolving, and including for mechanisms that allow for these changes in the PPP agreement allow for its ultimate sustainability and survival in the long term. In this respect I make some recommendations as to structures that would allow for periodic changes in the PPP agreement. There are several options for introducing periodic adjustments which I discuss and make specific recommendations on. These include (a) UK system of price-cap regulation, (b) US-style rate of return regulation, (c) Chilean style Rate of Return over the life of the PPP agreement, (d) Rate of Return Bands and Stabilization funds, and (e) fixed NPV of revenue with a variable length of PPP agreement. These have been briefly discussed. The applicability of any or part of these methods will depend on the actual conditions on the ground, the type of PPP agreement and the local legal and legislative environment where the contract will take place.

149 During the course of this research a number of international water and wastewater operators were contacted and the issue of making information about performance available to the public was discussed. It is interesting to note that there was consensus that information pertaining to performance of the PPP agreement should be made available to the public. There was an element of discomfort for full disclosure of financial information. The argument being made was that Developers did not want to ‘open their books’ to other operations as this was considered sensitive commercial information that could be used by competitors or even Grantor’s for other purposes than that of monitoring. Having worked for a private international water and wastewater operator (and in fact one of the companies contacted was my former employer) I have heard this same argument being made by my senior management at the time.