

Contract Provisions

Project Completion and Timing

A date for the completion of the project construction is typically established in the project agreement. Milestones are often agreed upon, setting forth important stages of progress in construction and the consequences of failure to meet each milestone. In case of a delay in completion of construction, the project company may be obligated to pay liquidated damages, which is a pre-agreed upon amount to be paid by a party in breach of a contractual obligation. This amount is usually stated either as an amount per day or as a flat amount. The contractor usually will be required to pay liquidated damages to the project company in case of completion delays for which the contractor is responsible. The liquidated damages payable by the contractor may not be sufficient to compensate the project company for the consequences of the delay. An extended delay in construction completion generally gives rise to a right to terminate the project by the host government.

The project company will want to include as many negotiated excuses as possible in the project agreement to excuse delay in construction completion, including force majeure and governmental delay. The host government will try to limit the negotiated excuses and provide for stiff liquidated damages provisions in the construction contract in order to facilitate timely completion of the construction. . One typical subject of contention between the project company and the host government in this respect is the requirement for third parties to be given access to the project site or the road, eg to perform some construction monitoring function on behalf of the lenders, but whose effective access to the site is not within the control of the project company, but is subject to the approval of the Host Country's authorities. In the interest of both parties, the Project agreement should therefore contain clear provisions to cover the consequences of either party's actions or inactions.

The risk whether or not completion will be achieved is known as "completion risk", and is typically not borne by commercial project lenders, who will rely on the project sponsors to absorb it. This risk can be absorbed in a variety of structures. In the simplest form, project sponsors would guarantee repayment of the loan until completion is achieved. This, however, is uncommon in infrastructure project financings where it is more likely that project lenders will rely on some form of turnkey fixed price construction contract. Such a contract would give the project lenders recourse to the parties responsible for construction of the project if completion is not achieved on time.

Construction Completion

The terms of the agreement must specify clear conditions for the construction completion, including a mechanism to agree variations to the construction contract, as well as an independent authority (usually an Independent Engineer, but it can also be an accounting company's construction branch) to certify the construction completion.

When as a result of a request by the contracting authority to the project company, or as initiated by the project company, the design or scope the project is modified, the contractor will typically be allowed to request a change in the terms and conditions of the project construction and an extension of the time agreed for the completion of the project in the event of a “change order”, or circumstance outside its control. The contractor is usually required to exercise best efforts to mitigate delays and additional costs associated with the requested changes. The additional costs from such changes may lead to higher revenue requirements for the project and therefore higher charges or tolls.

Project Completion and Occupancy

Some minimum requirements for the Independent Engineer or other monitoring authority to be included in the construction completion clause are:

- Participation in preliminary inspections of work prior to final inspections.
- Participation in the preparation of project charts and monitoring progress towards its completion.
- Timely provision of operations and maintenance manuals, equipment warranties, releases of liens and other final contract requirements.
- Monitoring and administration of final releases of contract retainer after acceptance of contract work.
- Coordination of project occupancy.
- Organization of post-project evaluation.

Also, the terms of the agreement must take into consideration all the local construction standards, safety-related ordinances and laws, both on a local and national level. In some instances, different municipalities where the roads are located would have somewhat different regulations and requirements. It is some companies’ practice to list in the Construction Agreement the various laws and ordinances that the construction must comply with, in order to prevent post facto actions by the government that would result in burdening the construction company with new requirements after a price was set.

Most importantly, the public party must be required in the contract clause to enable the monitoring teams access to the project site, and failure to do so should be construed as materially adverse governmental action.

Scope of Work

The scope of a project should be clearly defined, including the obligations of the project company or other contracting entity. Since the scope of a project is crucial to lenders for deciding whether the project is financeable, it should be negotiated carefully during the pre-development phase procedures and documentation.

All rights and obligations of each party, e.g., host government, project sponsors and/or, project company, need to be clearly identified because the project company will then enter into a construction contract or an operations and maintenance contract with a

construction contractor, or an operations and maintenance contractor as the case may be, for the purpose of carrying out its obligations to the host government.

Parties should avoid include any undertakings in the scope of work clauses which are not essential to the project. Of course, the actual scope and responsibilities of any project will depend on the circumstances of each individual project.

Design

In a road construction project the design will often be provided to the project company by the contracting authority as an outline with the task to develop a detailed design.

A number of issues arise out of this process which may have important financial consequences for the project.

The first one is the fact that the contracting authority may wish to transfer to the project company any liability for defective design that might arise out of information and data that may have been provided to the project company with the outline design. The project company which will most likely be the concessionaire operating the road will need to be satisfied with the design provided by the contracting authority and the risks involved with it.

Another important issue associated with the design of a road concession arises from the fact that the infrastructure will in principle revert to the government at the end of the concession period and therefore the government will want to ensure that it is designed precisely to its needs. This often leads the contracting authority to modify the design during the project phase (this may arise for example out of the public consultation phase, or the desire to satisfy public opinion requests).

Such a modification will have obvious consequences in terms of time and costs of the project which must be anticipated. In some legal systems the contracting authority will have the right to impose such modification, even if it is not spelled out in the contract, upon certain conditions, namely that it assumes the financial consequences of the change. In other legal systems it will have to be negotiated and the additional costs agreed before being implemented, with the risk of having to enter the dispute settlement process in case of disagreement between the parties (Refer to the section Contract renegotiation and adaptation).

Such a process of managing design changes during the contract life is all the more important for the project company that it will doubtless have agreed with the construction contractor a variation clause whereby any design change will need a variation or change order from the project company prior to being implemented, and will therefore cause additional costs. If the project company does not therefore want to assume such costs resulting from the host government requests, careful drafting of both the concession and the construction contracts will be required.

Financial requirements

Whenever the project financing is to come from a private concessionaire, it may be appropriate to provide in the project agreement that, prior to commencing construction, the project company will be required to show to the contracting authority suitable evidence that it has raised funds or secured binding commitments from reliable sources for the provision of finance sufficient for the carrying out of the works and that safeguards exist under the financial arrangements to prevent work continuing, once it is clear that the level of such commitments is insufficient for the completion of the works.

Substitution

A standard feature of PPP projects, including in the road sector, is now for host governments and project sponsors to agree to give the project lenders the right to be substituted to the concessionaire in case of default. This so called “step in” right is part of the overall security package which the lenders could feel comfortable with to alleviate the sometimes incomplete nature of national security and insolvency legal systems. Refer to the Security and Insolvency Laws, in the Legislative Framework section above for more detail.

Conditions and consequences of the exercising of this right by the lenders should be carefully drafted, but parties should also bear in mind that such a right is of a contractual nature and therefore its validity may or may not be recognized by the national law of the country concerned, which, if it were not ascertained, could render one essential feature of the project security package null and void.

Data, representations and warranties

In a road project, the host government will usually provide the project sponsors with relevant information of technical, commercial or financial nature that may have been prepared by or for the government for the preparation of the project. As indicated in the Design, such information will have been provided to all bidders in the bidding process together with an outline design of the infrastructure to be built.

The host government will consider that it is the successful bidder’s responsibility to verify such information in developing the detailed design. It will therefore seek an exclusion from all liability in this respect. It may not be easy for each bidder to verify such information, and each bidder will therefore have to assess its own risk and try to protect against it.

Furthermore, the host government may also wish to clarify that, should the project sponsors wish to raise finance whether by debt or equity, they should make expressly and unequivocally clear that the government makes or has made no representation or guarantee of any kind as to the viability of the project or accuracy of any estimate, or projection or information of whatever kind in respect of the project.

Land use rights

Acquisition and land delivery

The host government, as long as it has the applicable land rights, typically provides the project company with the rights to use the project site, including rights of way and vacant enjoyment, but may retain title to the land. The arrangements for access rights between the host government and the project company with respect to the project site typically are set forth either in the project agreement or in a separate lease agreement or land purchase agreement. The host government also usually will have the obligation to provide for rights of way or otherwise adequate access to and from the project site.

The question of whether or not title to the land remains with the host government or passes to the concessionaire is one which has legal, financial as well as political implications.

In countries where the law allows for public land to be transferred to a private concessionaire (refer to the section on Property Laws, under Legislative Framework), the host government should evaluate whether it is cost efficient to pass the land costs on to the concessionaire, particularly in view of the tax, stamp duty and asset depreciation impact. If private land is involved, which for a road project is likely to be the case, the host government will want to designate a project site that makes sense for the project, but does not result in development that is disruptive to the lives of its people. Also the expropriation of private land will have to be in return for compensation, which may constitute part of the costs to be borne by the project company.

The project company will want to acquire all necessary interests in or access to land on time at a pre-determined cost, as well as concomitant rights for the development, construction and operation of the project. The issue of planning permission and other permits and consents must be either resolved beforehand with a planning permission granted, or adequately dealt with by undertakings from the host government that such permissions and consents shall be granted. Because of the risk of delay and its resulting cost which neither the project company nor its lenders are prepared to bear, the lenders will need to be closely informed well before the closing of the loans as this will be a decisive factor in their agreeing to fund the project.

The acquired land must be in a condition conducive to the development of the project, or clear of all structures and other potential impediments and accessible from other relevant locations. The question of who will provide the on and off ramps and their location will also need addressing.

Archaeological and other findings

The consequences of the discovery of artifacts of cultural or historical significance should be carefully addressed by answering the following questions prior to drafting the contractual language:

- What does the local law require in case of archaeological discoveries?
- Are any indigenous populations'/protected populations' rights involved?

- What would be the most efficient procedure in such cases?
- What are the short- and long-term consequences for the project?
- Who bears the risk of delay and cost overruns resulting from archaeological findings?

For example, in a project in the Middle East, a special clause was contractually required of the government by the project lenders to absorb the risk of any project delay caused by archaeological discovery. The agreement extended the construction period to accommodate any archaeological excavation and survey and required the government/grantor to bear the cost of any “change order” which would relocate portions of the project. Such measures are not always necessary if the government finds alternative methods of guaranteeing progress of the project.

The same issues should be raised and the same process followed in the event of the discovery of other findings during construction, such as hazardous substances.

Environmental safeguards

The identification and minimization of environmental risk are key components now in infrastructure development. Environmental due diligence in respect of such projects and the legal regime within which they are being constructed are crucial if the project company is to make a proper assessment of the risks, as is an appreciation of the environmental requirements of public agencies which will be involved with the project.

The project company is generally required to comply with all relevant environmental laws, rules and regulations, including the relevant laws of the host country and the guidelines of any participating multilateral institutions, e.g., the World Bank Environmental Guidelines. Compliance with environmental guidelines and requirements may sometimes be the most difficult aspect of any project’s implementation. The project company wants to achieve environmental compliance, but at the lowest possible cost to itself.

Environmental protection issues will often come at the forefront of the public debate that will take place during the public consultation phase. For long road projects, such issues are likely and projects have sometimes had to absorb considerable time delays, or possibly even be cancelled completely.

The main interests of the host government are to protect the environment of the country, as required pursuant to local law and regulation, and to satisfy the environmental concerns of any participating multilateral institutions, whose environmental standards often are more rigorous than local law and regulations.

Material Adverse Governmental Action

The definition of materially adverse government action includes any event or instrumentality under the control of the government that would adversely impact the economic balance of the project and thus interfere with the private parties’ obligations under the various agreements. Examples of materially adverse government actions are:

- changes in relevant laws or regulations directed at and detrimental to the project (e.g., adverse changes in environmental and tax laws and regulations);
- enhancing or establishing competing projects and
- interruptions of construction or operation.

Certain exceptions may relate to national security, the national interest or public safety. The host government usually is requested to agree that, in case of a “materially adverse action,” the host government will have to compensate the project company, directly or indirectly, and the lenders for the added cost to and losses of the project company and the lenders resulting there from, or the project company may have the right to terminate the project agreement with appropriate compensation paid.

The host government must preserve its political freedom in case of national security, national interest or public safety, but also has a strong interest in assuring the lenders and investors that it supports the project and will not act detrimentally to the economic welfare of the project. The host government will therefore want to retain the right to interrupt the construction or to step in to take over operations of the road, under certain well defined circumstances. The conditions, duration and consequences of the exercising of this right by the host government should be clearly spelled out in the project agreement.

The main interest of the project company is to receive an explicit undertaking from the host government to avoid any actions materially harmful to the project or at least to obtain a legal basis for receiving compensation for any actions that are materially harmful to the economic welfare of the project.

Pricing Formula

The financeability of any project depends ultimately upon the certainty and creditworthiness of its source of funds. For motorways or bridge projects, the source of funds may be public financing (taxes) or project revenue, e.g., tolls to be collected from motorists (or a combination of both). If tolls are an element of or the sole source of funding, the price to be received by the project company for such tolls is one of the most important terms to be negotiated.

Choosing the right toll level is an equation with three parameters : what the user is prepared to pay, if anything ; what cost the government is prepared to assume, if any and what the concessionaire is prepared to accept for its investment to remain profitable.

The host government must keep the price for the services provided by the project company within politically acceptable parameters, given the high profile that most infrastructure projects have, the relatively large number of persons affected and the extent to which most infrastructure services/products are perceived as basic to the live of people. At the same time, the host government has an interest in making sure that the prices it is willing to pay (or have charged) are not so low as to discourage infrastructure investment by the private sector.

The project company needs to receive payment for its services sufficient to cover all operating expenses, payment of debt obligations and an adequate return on equity.

In order to satisfy the project's lenders, the revenue structure needs to provide with relative certainty that the project will receive revenue sufficient to cover all fixed costs of the project, including, most importantly, the debt service obligations of the project company. In motorway projects, the host government may be requested to provide a standby operating support facility to ensure that the project company has enough resources to satisfy its debt service obligations if actual traffic levels fall below certain predicted traffic levels, and toll from users are not sufficient to attract a private investor. This is because lenders typically are not willing to bear the risk of a reduced demand for a project's services/product and will generally require the greatest possible degree of certainty regarding project revenues.

If such a standby support facility is not deemed sufficient by the project company or the lenders to guarantee sufficient revenues, then other mechanisms have been devised such as shadow tolls or annuity payments, which are extensively discussed in Module 2 under the Revenues section (Module 2 -> Revenues), as well as in Module 5, under the Financial Analysis section (Module 5 -> Financial Analysis).

The revenue source for the project company is typically adjusted for certain changes in project variable costs, inflation, foreign exchange rates and certain other relevant, negotiated factors. The inflation and foreign exchange adjustments are keyed primarily to the debt service and capital requirements of the project company and, therefore, are generally prorated according to the relative proportions of the international and domestic components in the total project financing.

A revenue source may be enhanced by the existence of Secondary Developments, i.e., ancillary developments along the road that may be useful for the users such as service stations and recreational areas, which could provide additional revenue for the concessionaire. Refer to the Secondary developments section.

Where revenue forecasts for toll road projects in highly densified areas have been particularly favorable, contracting authorities have sometimes been able to negotiate a sharing of the revenues with the concessionaire, where revenues have exceeded a pre-determined level.

Government and other support

Governments can support a project financially and non-financially, in the form of a "comfort letter," legally binding contractual commitments and legislation relating to the project. A government can support a project's economics by sharing ownership of the company responsible for the project, offering capital grants, subordinated loans, grants during operation of the project, and transfers of assets to the project company. Non-financial support is usually linked to the bankability of the project and the requirements of lenders that government will behave in a particular way and recognize the security rights of lenders in the event of a serious project default. This type of support is usually in the form of a government undertaking separate from the main concession agreement, and may also translate in a government support agreement between the government and the lenders. All main forms of Government support are detailed in Module 3 -> PPP Policy Framework -> Financial Framework -> Incentives and Guarantees.

In addition to government support, financial instruments are also available from international financial institutions and donor agencies such as USAID/DCA, the IFC, the ADB, OPIC, EXIM banks and other bilateral and multilateral donors to assist a country development programme. This is referred to in the Financial Analysis section of Module 5 under Government support, and Credit enhancement (Module 5 -> Financial Analysis)

Secondary developments

The project company may be provided rights to explore project-related opportunities such as the development of land adjacent to the project site in order to enhance project revenue, particularly in cases where projected revenue may otherwise be insufficient to provide the bankability of a project. For example, in a motorway project, the project company may be granted the right to develop gas stations, rest stops and restaurant and lodging facilities on land adjacent to the motorway. The revenue from secondary developments, however, generally comprises only a minor fraction of the total project revenue required to make the project bankable.

For certain infrastructure projects, the main interest of the host government is to support the bankability of the project by providing additional sources of project revenue. The host government typically would use secondary developments as one of several ways in which certain types of projects may be supported. The host government may be able to negotiate a reduction in other support obligations it has to undertake in exchange for the granting of secondary development rights. The host government may retain an interest in, or reversionary rights to, secondary developments.

The main interest of the project company or construction or Operation and Maintenance Contractor in any given infrastructure project is to earn as much profit as possible from the project but also to support the bankability of the project. To facilitate finding third parties to undertake the secondary developments, the project company or contractor often will request to separate the secondary developments from the term of the project agreement (or concession), in effect giving the third-party owners of the secondary developments rights in perpetuity.

Currency Conversion, Availability, & Transferability

Since most infrastructure financing is of a transnational nature, exposure to different currencies (and their availability and convertibility) by some project participants, in particular the project lenders and its equity investors, is a risk present in almost every transaction. Currency conversion and availability risks arise primarily because of a difference between the currency in which project revenue is received (local revenue) and the currency in which the project is financed (foreign debt currency and expense currency). In particular, a foreign exchange shortage in the host country may lead to the project company being unable to convert local currency into the foreign currency in which the project debt service obligations are to be made or in which the equity holders have to be paid.

In general, most host governments will have a fundamental interest in preserving and prioritizing the expenditure of their foreign exchange reserves, whereas the main interest

of the project company will be to have sufficient foreign currency available at any given time in order to be able to make the required hard currency payments when such payments become due and payable. Ideally, the project company would prefer the project revenue sources to make payments in the applicable foreign currency. Since the project revenue sources often tend to be within the local/national market in which the project is located and since their access to foreign currencies, thus, is similarly restricted, they prefer to, and in almost all circumstances will, pay in the respective local currency.

For those reasons, the host government will be expected to provide a sovereign guaranty of foreign currency availability and convertibility or to give the project company some other source of priority access to foreign exchange. In doing so, the host government generally will not commit itself to providing any more foreign exchange than is absolutely necessary (or which the host government is able to provide - based upon its own limited resources). Thus, where available at reasonable cost, political risk insurance covering foreign currency availability and convertibility (so-called foreign exchange risk insurance) and/or commercial currency swaps or similar hedging transactions are generally preferred by host governments for purposes of mitigating the risk of foreign currency unavailability.

Foreign exchange risk insurance may be available from bilateral and multilateral export credit agencies. For example, one source for obtaining political risk insurance against currency conversion risks is the Multilateral Investment Guaranty Agency (MIGA), a member of the World Bank Group (www.miga.org). The coverage MIGA offers for such risks would insure against excessive delays in acquiring foreign exchange caused by host government action or failure to act, by adverse changes in exchange control laws or regulations, and by a general deterioration in conditions governing the conversion and transfer of local currency.

Cross-Subsidization

In the past, host governments have sometimes entrusted public-private partnerships to develop complete networks of required infrastructure, thereby allowing them to pool a multitude of single infrastructure projects in one system (e.g., in France and Japan with respect to toll roads and bridges). From a financial perspective, the pooling system provides an important added value to the network of projects because it allows revenue to be drawn from a profitable infrastructure project to compensate (or cross-subsidize) for the lack of sufficient revenue from another project.

Since all projects in the network are intertwined and require the operability of each and every project in order to offer customers the full benefit of the network, pooling and cross-subsidization are legitimate, powerful tools for host governments to realize economically viable projects (e.g., providing enhanced road access to more remote regions of the country in order to further the market access and overall economic development of the local industries) that might not be sufficiently bankable as stand-alone projects.

One way of implementing cross-subsidization of the pooled projects from the very outset is to standardize the tolls charged for all projects involved (or, at least, for similar projects in the network, e.g., bridges or road sections). Such benchmark toll rates would not be sufficient to operate the non or less competitive projects of the network and,

correspondingly, would not allow for a sufficient return to finance such projects on a stand-alone basis. The harmonized toll rate, however, is tailored in order to create a higher-than-needed revenue base in the competitive projects. Accordingly, a steady stream of 'surpluses' from these projects can be used to subsidize and finance the less competitive parts of the network, while, at the same time, making it more affordable to use, and, thus, creating a higher incentive to use these parts of the network. As an additional and important side-effect, cross-subsidization of network projects by way of toll harmonization (often also named tariff averaging) might also result in an overall tariff system that is regarded as fair, more consistent and more transparent by network customers.

Module 2 -> Scope -> Packaging Projects provides further description of issues related to cross-subsidization.

Non compete or exclusivity clauses

The bankability of any project depends ultimately upon the certainty and creditworthiness of its revenue sources. For example, for motorway or bridge projects, the revenue source is the tolls to be collected from the motorists. In order to satisfy the project's lenders, the overall revenue structure needs to provide with relative certainty that the project will receive revenue sufficient to cover the fixed costs of the project, including, most importantly, the debt service obligations of the project company. Lenders customarily will not be willing to bear the risk of a reduced demand for a project's services or products and will generally require certainty regarding project revenue.

Thus, in infrastructure projects, the host government frequently will be asked to agree upon a non-competition clause in the concession agreement. Otherwise, in a toll road project, the host government would be free, at any time, to build and operate a public road running parallel to the project motorway, that because it is free of charge to users, would be able to induce away most of the traffic. Thus, the main revenues of the project would be substantially decreased, making it impossible for the project to succeed.

The effect of the non-competition clause is, therefore, to protect the monopoly or quasi-monopoly given by the host government to the project company in order to supply the required infrastructure service. It prohibits the host government from encouraging or being involved in the construction of competing infrastructures for the duration of the concession period.

However it may well be that the country's legislation contains provisions requiring an alternative toll-free route to be provided if a toll road is to be created between certain locations. In such a case, that country government will have to decide whether to maintain that requirement to the risk of not being able to finance the project or to amend its law to make it possible. A compromise solution might be to only grant the project temporary exclusivity that is limited to the duration required to reimburse the loan, instead of the whole duration of the concession.

Local requirements

The project company must apply for, obtain and maintain in full force and effect, all governmental permits necessary for ownership, development, construction, start-up, operation and financing of a project. Certain rights may be granted in the project agreement itself. If any permit is not timely obtained, the project may be prohibited from proceeding, constituting a political risk which project sponsors and lenders will only accept if the reason for the failure to obtain the permit is a default of the project company. The types and amount of permits for a project vary depending on the sector, site, technology, local process and other variables. The project company and private contractors will want to be assured that it will obtain all necessary permits, authorizations or consents on a non-discriminatory, timely and fair basis and that they be respected by the host government authorities and third parties. The project company may attempt to negotiate an agreement that any failure to obtain, delay in obtaining or the revocation of any necessary permits, authorizations or consents, unless caused by a default of the project company, be considered an event of default of the host government or materially adverse governmental action.

Compensation for Breach

The project or concession agreement typically will contain specific remedies or rights of recovery for breach of contractual obligations by the parties, e.g., a delay in construction completion or default in the provision of services during the project's operational phase. Agreed upon remedies or rights of recovery (including compensation) will sometimes be the exclusive remedy (other than termination) for breach of certain obligations, and in such a case an exclusive remedy clause will be stipulated in the project agreement.

The main interest of the host government in any agreed upon remedy is to keep the project operational and to obtain fair and equitable compensation for the relevant breach of contract in an expeditious manner. Liquidated damages are a common form of compensation in case of a breach of contract. They comprise an amount that the parties stipulate ahead of time with respect to how much the breaching party (who is in breach of its obligations) must pay in order to compensate the other party for such breach. Typically, the amount to be paid by the party in breach is assessed on a per-diem basis. In other cases damages are assessed per occurrence or as a flat amount. The appeal of a liquidated damages remedy for the host government is that it creates a clear incentive for the project company to perform and dispenses with the need to prove damages in any dispute thereby accelerating the dispute resolution process and compensation to the host government.

The project company has a similar interest in obtaining fair and equitable compensation for a breach by the host government in an expeditious manner. The protection of the project's cash flow is of paramount importance to the project company as well as the lenders. The appeal of assessing liquidated damages for a breach by the host government is the relative certainty of the amount of compensation the project company can expect to receive. Liquidated damages also impose a ceiling on the liability of the breaching party. A liquidated damages remedy should not be so excessive so as to constitute a

penalty, for in such a case, the law of certain jurisdictions would deem them void, and in other jurisdictions, the Courts would be entitled to reduce their amount.

Cost overruns

Minimizing the risk of cost overruns is a principal concern of the construction contract and a key to a road project's success. The causes of cost overruns are well known: increases in the price of labor and materials, engineering flaws, delayed schedules and unexpected ground conditions can quickly eclipse a project budget. Without adequate funding cushions, cost overruns may be compounded by increased debt service payments.

Several mechanisms are employed to mitigate these risks. As a rule, design and construction contracts are awarded on a turnkey basis - requiring the contractor to build the facilities in a certain time for a fixed price - thereby allocating most of the cost and completion risk. Additional incentives for efficient work include bonus payments for early completion and an award of savings achieved over the expected contract price. Downside risk is offset by requirements that the contractor put up a performance bond to offset cost overruns, retainer of payment under the contract to establish a reserve against future cost increases, and provision for liquidated and stipulated damages in the event of completion delays or quality shortfalls. Other ways to reduce the risk of cost overruns include hiring experienced contractors, using proven technology, entering into long-term supply contracts, and hedging against currency fluctuations. Price increases are generally allowed for changes or delays caused by the project company.

Independent Engineer

With the consent of both the host government and private parties, an independent engineer is often appointed to serve as an independent arbiter for technical questions or disagreements. The costs of the independent engineer are to be paid as set forth in the agreements, and sometimes are fully borne by the project company. Both the host government and the private parties have an interest in retaining a qualified and experienced, impartial independent engineer. If there are disagreements with the independent engineer, an effective dispute resolution mechanism should be in place to resolve such disputes.

Lenders will seek to avoid situations where they have reduced control over their obligations to make advances. Therefore each lender will want to have the right to reject the engineer's evaluation. Several issues must be clearly resolved by the mechanism for challenging an engineer's report in order for the lenders and borrowers to be bound by it. For instance, (i) What margin of the private parties' disagreement with the engineer is sufficient for the engineer's report to be rejected? (ii) How many lenders or private parties have to disagree with the engineer before the report is dismissed? (iii) Will it be possible to dismiss the named engineer?

Quality Assurance

Quality assurance is a critical factor in all stages in the construction and operation of a toll road. General technical specifications for project construction are typically set forth in the project agreement, usually with appropriate performance warranties and liquidated damages for substandard performance. Not only must each phase of development meet strict technical requirements, but the transition between different elements - such as toll booths and interchanges - must be seamless. The contract documents set forth necessary standards for each element of the project. However, it is also important to incorporate oversight bodies into the contractual structure to manage quality among the various contractors and ensure that technical standards are met. Independent engineers help to ensure quality by reviewing all technical plans associated with the project. Often, an independent construction manager will help to oversee the various phases of construction and report to the project company, which bears ultimate responsibility for the overall quality of the road. Contractors and the project company must also coordinate with governmental regulators to ensure that the project complies with state-wide standards. Ideally, a quality assurance plan will account for all these interfaces and coordinate prior reviews and ongoing inspections among overseeing bodies to ensure that all project criteria are satisfactorily met.

Performance requirements in operation & maintenance contracts

Road condition, as well as the quality of operation and services provided to the road user, can be expressed through indicators for service quality levels. These are used under performance-based contracts to define and measure the desired performance of the concessionaire. The service level indicators are thus the minimum accepted threshold for the quality characteristics of the road network for which the concessionaire is responsible. The contract may stipulate that service quality levels increase over time, from the existing levels at the beginning of the contract to the desired levels to be reached gradually over time. This will implicitly allow the contractor to distribute improvement works over a long time period.

In some cases, performance levels can also be used as incentives to to adjust the level of the fee paid by the government to the concessionaire, such as in the case where the concessionaire revenue is in the form of an annuity payment. This option is discussed in more detail in Module 3 Policy and Planning, under the Payment and Revenues section (Module 3 -> Policy and Planning).

Performance indicators and methods for measurements are detailed in Module 2 -> Scope -> Performance indicators for maintenance works

Handover at end of Concession

The most common provisions to ensure that the concessionaire ensures proper maintenance of the infrastructure until handover to the Public Authority at the end of the concession period is by way of undertakings and warranties enacted during the concession period. These undertakings and warranties provide for the maintenance of the infrastructure in

accordance with the agreed maintenance plan and are backed up by financial guarantees or a maintenance bond, which may be called upon by the Public Authority in case of default by the concessionaire. The extent and duration of such guarantees may vary depending upon the circumstances of each case, but can start to apply as early as five years before the end of the concession period.

Handback requirements (service quality performance, residual life span) are described in Module 5 => Stage 5 Contract Management => Handback of Facilities at Contract End

While there is reference material of such contract provisions to address this issue, both in standard concession agreements and current concession contracts, there are few, if any, examples of highway infrastructure concessions which have actually been handed over to the Public Authority at the end of the concession period.

Whilst there are several examples of road/highway infrastructure being either taken over by the Public Authority (State Route 91 in California), or abandoned by the Concessionaire (Mexico), these were at the initiative of the Public Authority during the concession period and did not thus result from the contractual transfer of the infrastructure at the end of the concession period.

Moreover, in France, and despite a long history of toll highway operation by private concessionaires, there is no precedent for handing over of a road/highway infrastructure to the Public Authority (state-level) at the end of the concession period, since all of the concessions have actually been extended in return for the Concessionaire assuming new obligations. Whilst some road concessions may have been returned to local authorities, no details are available.

However, bridge concessions in France have concluded, but under specific circumstances. The Saint Nazaire bridge concession did conclude but was in reality taken over voluntarily by the Public Authority.

The concession of the Tancarville bridge was extended in return for the concessionaire assuming the construction of the Normandy bridge. This procedure, which has been widely used in France with existing highway concessions, is known as « adossement ». However, in the case of the Tancarville bridge, serious defaults and maintenance failures were discovered by the Public Authority, to the extent that the concessionaire (la Chambre de Commerce) asked the Public Authority for financial support.

However for concessions in local transport services and parking lots, there have been many cases of concession handover, where financial guarantees, of the type described above, were enacted to protect the interest of the Public Authority by ensuring adequate maintenance until the end of the concession period, and such mechanisms seem to have worked satisfactorily.

The scale of the issue varies in accordance with the extent of the concession assets which are to revert to the Public Authority, either automatically or by transfer, and the degree by which they have been taken into account for financial cash-flows of the project.

In some cases (refer UNIDO agreement) all the concession assets are transferred back to the Public Authority, whereas in other cases only those assets which are necessary

for the operation of the infrastructure are transferred back. In such systems the law distinguishes between the « biens de retour » which revert automatically to the Public Authority, and the « biens de reprise » which the Public Authority may choose to purchase or not at the end of the concession. The issue of maintaining the concession assets in good working order only arises with the former, and the level of maintenance required to satisfy the good working order test is to be found in the Concession Contract Maintenance Schedule or Plan.

The UNIDO standard concession agreement sets out, in more detail, a mechanism similar to that of the Channel Tunnel concession contract.



Sample UNIDO contract provisions for handover, Article 14 to 17.

Extract from Eurotunnel Concession Agreement, 1986

Clause 39 : Consequences of the Concession Period Terminating

39.1 Upon expiry or termination of the Concession Period for whatever reason, this Agreement (other than Clauses 30, 32, 33 and Chapters V and VI) shall cease to have effect, subject to all rights and obligations as between the Principals and the Concessionaires accrued prior to such cessation.

39.2 On the expiry or termination of the Concession Period for whatever reason and without prejudice to any rights of the Concessionaires to compensation

In France all immovable property which is within the domaine public will revert to the French State. In the United Kingdom the term of the leases granted by the British Minister referred to in Annex II shall end; and

The interest of the Concessionaires in all movable property and intellectual property rights necessary for the construction or operation of the Fixed Link shall become the joint property of the two Principals, without payment and clear of any security interest except for any security interest created in accordance with Clause 31.2

39.3 The Concessionaires shall ensure that all property referred to in Clause 39.2 shall be in good working order and in a good state of repair. The Principals may at any time during the last 5 years of the Concession Period require the Concessionaires to provide them with appropriate financial security for this obligation.

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.../...

39.4 Upon the expiry or termination of the Concession Period except pursuant to Clauses 3.2 or 3.6 or in circumstances where the compensation is payable to the Concessionaires pursuant to Clause 38, the Concessionaires shall, if the relevant Principal so requests:

a) Where the construction of the Fixed Link has not been satisfactorily completed, ensure that all land comprised within the area of the Fixed Link above the low water mark is either put into a condition in which it can be used for the purpose for which it was being used before any of the Works were commenced on it or is put into a condition in which it can be used for any other purpose which the relevant Principal considers appropriate, provided that this provision shall not be taken to require the land to be restored to its level before the commencement of the works.

b) And in any other case, all works and structures above the low water mark are made safe.

The relevant Principal may lay down the periods within which and the conditions subject to which these works shall be carried out.

39.5 If the Concessionaires fail to carry out their obligations under this Clause, the Principal concerned may carry out the relevant works and recover the costs from the Concessionaires.

39.6 For the avoidance of doubt, upon the expiry of the Concession Period for whatever reason, the Principals shall not be obliged to complete the construction of or to operate the Fixed Link.