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The Build, Operate, and Transfer ("BOT") Approach to Infrastructure Projects in Developing Countries

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In a typical BOT infrastructure project, a private-sector project company builds a project, operates it long enough to pay back project debt and equity investment, then transfers it to the host government. Does the BOT approach work? It can. But if the same project can be implemented as a turnkey construction contract financed by sovereign borrowings, the time saved and the greater certainty of the project going forward may warrant the more traditional approach.

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This paper — commissioned by the Bank's Legal Department and co-sponsored by the Technical Department, Europe, Middle East, and North Africa Regional Office and by the Infrastructure and Urban Development Department — is part of a larger effort in the World Bank to review different techniques of privatization of traditional public sector activities, examine how they have been applied in practice, and evaluate their strengths, their shortcomings, and the conditions for their successful application in World Bank member countries. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Dolie Schein, room F4-026, extension 70291 (51 pages, plus 46 pages of annexes).

Augenblick and Custer review the BOT (build, operate, and transfer) approach to building and financing such infrastructure projects as power plants, toll roads, port facilities, transmission lines, and water supply systems in developing countries.

In BOT projects, private-sector sponsors — usually international construction contractors, heavy equipment suppliers, and plant and system operators, often together with local partners — make equity investments (typically 10-30 percent of the total project cost) in a private project company that will *build* the project, *operate* it long enough to pay back the project debt and equity investment, and then *transfer* it to the host government.

The project company raises debt financing (typically 70-90 percent of project costs) from commercial sources, usually backed by export credit guarantee agencies and by bilateral and multilateral lenders. Substantial support from host governments is required.

The BOT approach was developed in the late 1970s in response to constrained developing country budgets and a downturn in work available for international construction firms. Construction firms may no longer be as interested in promoting BOT projects as they were earlier. Many BOT projects have been proposed, but few have proceeded to financial closure, let alone full implementation, in developing countries.

The BOT formula for infrastructure projects is by no means a panacea, conclude Augenblick and Custer. BOT projects are exceedingly complex, financially and legally. If countries can implement the same project in a more traditional way — with sovereign borrowings financing a turnkey construction contract — the time saved and the greater certainty of the project going forward may warrant the more traditional approach.

But if a country is unable — or for budgetary or policy reasons prefers not — to finance all needed infrastructure from budget resources or sovereign borrowings, the BOT approach is one option. And in the right context it appears to be workable.

Moreover, BOT projects should become easier to negotiate and implement as their basic structure is better understood and as standard solutions to common issues become more accepted by host governments and in the marketplace.

A BOT project may provide some "additionality" in tapping sources of private financing that otherwise might be unavailable. The sponsors' commitment of substantial equity to a project assures that they will remain committed to the project's successful operation over the concession period. Their "at-risk" investment provides a strong incentive to have the project perform above its minimum expectations. If the project is properly structured, the benefits of such enhanced performance will be shared with the host government. Having the design, implementation, and operation of a BOT project largely in the private sector's hands may provide economies and efficiencies that balance or even outweigh the higher financing costs of nonsovereign borrowing and equity investment.

But a host government that wants to promote BOT projects must understand and be willing to accept the complexity and time-consuming nature of the process, the extensive host government support that must be provided, and the rates of return that commercial lenders and private equity investors will expect.

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Annex 3 to the report on proposed BOT projects in Turkey was prepared by Jean-Jacques Lecat of Bureau Francis Lefebvre in Paris and is reproduced here with his authorization.

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SUMMARY

- This report reviews the BOT (build, operate and transfer) approach for building and financing infrastructure projects, such as power plants, toll roads, port facilities, transmission lines, and water supply systems, in developing countries.

- BOT projects involve:

  - Private sector sponsors, usually international construction contractors, heavy equipment suppliers, and plant and system operators, often together with local partners,

  - Making equity investments, typically 10% to 30% of the total project cost, in a

  - Private project company which will build the project, operate it for a period of time sufficient to pay back the project debt and equity investment, and then transfer it to the host government.

  - Debt financing (typically 70% to 90% of the total project cost) is raised by the project company from commercial sources, usually backed by export credit guarantee agencies, and from bilateral and multilateral lenders.

  - Senior lenders to the project company typically are not covered by direct "full faith and credit" sovereign guarantees, but substantial support from host governments is required, including guarantees of the performance of government entities involved in the project and guarantees of foreign exchange risks. In some cases, government support has included a government standby credit facility to provide subordinated loans to the project company when necessary to cover senior debt service.

- The BOT approach was developed at the end of the 1970s as a way for countries with limited sovereign borrowing capacity and severe budgetary restraints to acquire needed infrastructure. A general downturn in work

available for international construction firms seemed to make these firms particularly eager to promote, invest in and develop their own projects. At the current time, while the third world debt crisis continues to restrict sovereign borrowings, and while government budgets are still constrained, international construction firms are busy and may no longer be as interested in promoting BOT projects as they were earlier.

- In spite of great interest on the part of host governments, potential sponsors, lenders and foreign aid agencies, and although numerous BOT projects have been proposed, relatively few large infrastructure projects have actually proceeded to financial close, let alone been fully implemented in developing countries.

- Extensive negotiations in Turkey, where the BOT label was invented, have apparently still not resulted in the implementation of a single major project. The negotiations for one or more large coal fired power plants, which several times have been announced as virtually completed, as well as for a metro system and an airport expansion, are apparently continuing.

- The governments of Malaysia, the Philippines, Pakistan, Thailand and Indonesia continue to show strong interest in the BOT approach.

- BOT projects are highly complex from both a legal and financial point of view. They require potential sponsors to spend years and millions of dollars on development and negotiation. They present novel issues for many host governments as to the proper allocation of risks and rewards among the parties.

- Proponents believe that a BOT project, if properly structured and priced, can provide significant "additionality" in financial resources for developing countries while achieving overall cost savings from efficiencies in design, construction and operation.

- The World Bank Group has supported the development of BOT projects in a number of countries. In addition to sector studies, feasibility studies and advice for host governments generally,

  - The World Bank has provided or has proposed loans to the governments of Pakistan and the Philippines which those governments will in

turn be able to use to finance or support BOT projects.

- The World Bank is looking at other ways to support BOT projects as part of its "Expanded Cofinancing Operations."
- IFC is prepared to act as an investment banker to host governments or project sponsors and to make equity investments in BOT projects, provide direct loans and underwrite and syndicate commercial loans.
- MIGA is prepared to provide investment guarantees to BOT projects.

- Although there is still too little experience with BOT projects to draw definite conclusions, the BOT approach appears to offer one possible method for developing and financing infrastructure projects in certain third world countries, provided those countries are sophisticated enough to deal with the technical, financial and legal complexities, are willing to provide the necessary government support, and are sufficiently creditworthy to attract the necessary private sector equity investment and debt financing.

- Any host government contemplating a BOT project should obtain expert counsel and advice on the technical, financial and legal issues involved.

THE BUILD, OPERATE AND TRANSFER ("BOT") APPROACH TO INFRASTRUCTURE PROJECTS IN DEVELOPING COUNTRIES

I. INTRODUCTION

This report is intended to provide an introduction to the build, operate and transfer (commonly referred to as "BOT") approach to financing, building and operating infrastructure projects in developing countries. Recent examples of projects which have been proposed on the BOT model include power plants, airports, port facilities, toll roads, metro systems, bridges, tunnels, water treatment plants, and submarine pipelines and cables.

In the post-World War II era, most infrastructure projects in developing countries have been built under the direct supervision of the government itself, or of a government agency or utility, and paid for by budgetary resources or sovereign borrowings. Several trends seem to have converged in the late 1970s and early 1980s leading to an attempt to find an alternative way to finance these projects. First, with continued population and economic growth in many developing countries, the need for additional infrastructure continues to grow. Second, the growing third world debt crisis has meant that developing countries have had less borrowing capacity and fewer budgetary resources of their own to finance the projects that are needed. Third, major international contracting firms which, in the middle 1970s, had been kept very busy, particularly in the oil rich Middle East, were, by the early 1980s, facing a significant downturn in business. They were looking for creative ways to promote additional projects. Finally, in the course of the 1980s a number of governments as well as international lending institutions have become increasingly interested in promoting the development of the private sector and in the "privatization" of traditionally public sector enterprises.

The search for a new way to promote and finance infrastructure projects in developing countries turned to techniques that are in fact not all that new. Similar arrangements, often known as "concessions," were widely used in the 19th and early 20th centuries to develop infrastructure in France and many other parts of the world. One of the best known projects to be developed in this way was the Suez Canal, but myriad examples could be cited of privately financed concessions to build railroads, tramways, water works, electric utilities and so on.

In more modern times, new techniques of providing substantial non-recourse project financing for major privately owned projects, particularly in the area of oil and gas exploration and extraction, were perfected in the 1970s. In the United States and other developed countries, similar project financing techniques have been applied to numerous privately promoted infrastructure projects, involving power plants, waste disposal facilities, bridges, tunnels, toll roads and office buildings.

Beginning in the late 1970s and early 1980s, some of the major international contracting firms and some of the more sophisticated developing countries began to explore the possibility of promoting privately owned and operated infrastructure projects financed on a non-recourse basis under a concession type arrangement. The term "BOT" seems to have been coined in the early 1980s by Turkey's Prime Minister Turgut Ozal to designate a "build, own and transfer" or a "build, operate and transfer" project (the terms are often used interchangeably). Other variants include: BOOT (build, own, operate and transfer); BOO (build, own and operate, i.e., without any obligation to transfer); BRT (build, rent and transfer); BOOST (build, own, operate, subsidize and transfer); etc.

Under the BOT approach, one or more sponsors from the private sector are authorized to create a private "project company" to build public works. The sponsors typically include a major international engineering and construction firm and one or more equipment suppliers. The sponsors will also expect to act as builders and suppliers for the project. The project company may include passive equity investors and even a minority equity participation of the host government.

The project company will then raise the bulk of the financing required for the project from commercial lenders, usually supported by export credit guarantee agencies, and from bilateral and multilateral financial institutions. The financing is typically on a "non-recourse" basis -- that is, the lenders will have no financial recourse for repayment of their loans against either the project sponsors (i.e., in the normal case the shareholders of the project company) or the host government. Recourse is limited to the project company and its assets, including real estate, plant and equipment and whatever contractual rights, performance bonds, insurance and government guarantees the project company has been able to obtain.

The project company will own and operate the facility for a period of time which is intended to be sufficient to pay off the debt incurred and to provide a reasonable return to the equity investors. At the end of this period, the project company will transfer ownership of the project to the host government.

This report will focus on the BOT approach for infrastructure projects in developing countries. Thus it will not discuss various types of privately owned projects built with non-recourse financing in the industrial, commercial, oil and gas, or mining sectors. The fact that goods or raw materials produced by such non-infrastructure projects can be sold in a competitive world

market and for foreign currency generally makes these projects easier to finance on a non-recourse basis than infrastructure projects. Nor will the report treat BOT infrastructure projects in developed countries, such as the Channel Tunnel between the United Kingdom and France or the various bridge and tunnel projects currently under construction in the United Kingdom, Australia and elsewhere. While these projects do serve, in some sense, as models for similar projects in developing countries, the typical political and economic uncertainties in a developing country environment raise additional obstacles to the BOT approach which are generally not present in developed country projects.

When first conceived by Prime Minister Ozal, and in the optimistic view of some host country governments even today, a major attraction of the BOT approach was supposed to be that a BOT project would be entirely "privately" financed, without any financial commitment from the host government. In practice, however, there has not yet been a purely private BOT infrastructure project of any significant size in a developing country. Extensive host government support, including a substantial financial commitment at one or more stages of the process, appears to be a central requirement.

This report has been prepared generally from secondary sources publicly available. These sources are listed in Annex 4. We have had the benefit of the views of a number of people who have been involved in negotiating and implementing BOT projects. We have not, however, been able to review the actual contractual documentation for any of the BOT projects discussed. Nor have we had access to detailed financial information that would allow us to evaluate the true cost of BOT projects and to compare those costs with infrastructure projects financed directly by host governments. Finally, because there is often a time lag between the

happening of events and reports in the press, some of our information as to the status of particular projects is no doubt already out of date.

The purpose of the report is not to make any definitive judgments about BOT projects or their future. Rather, it is to provide an overview of the BOT approach and to raise a number of the issues which should be considered by anyone involved in deciding whether or how to implement a project on a BOT basis. The report will draw on various existing or proposed BOT projects for illustrative purposes. Specific projects are not discussed in detail in the report itself, although Annex 1 provides a partial listing of BOT infrastructure projects in developing countries which have been reported in the press, Annex 2 reviews a few of the major projects in more detail, and Annex 3, prepared by Mr. Jean-Jacques Lecat of Bureau Francis Lefebvre in Paris, provides a brief overview of BOT projects which have been proposed in Turkey.

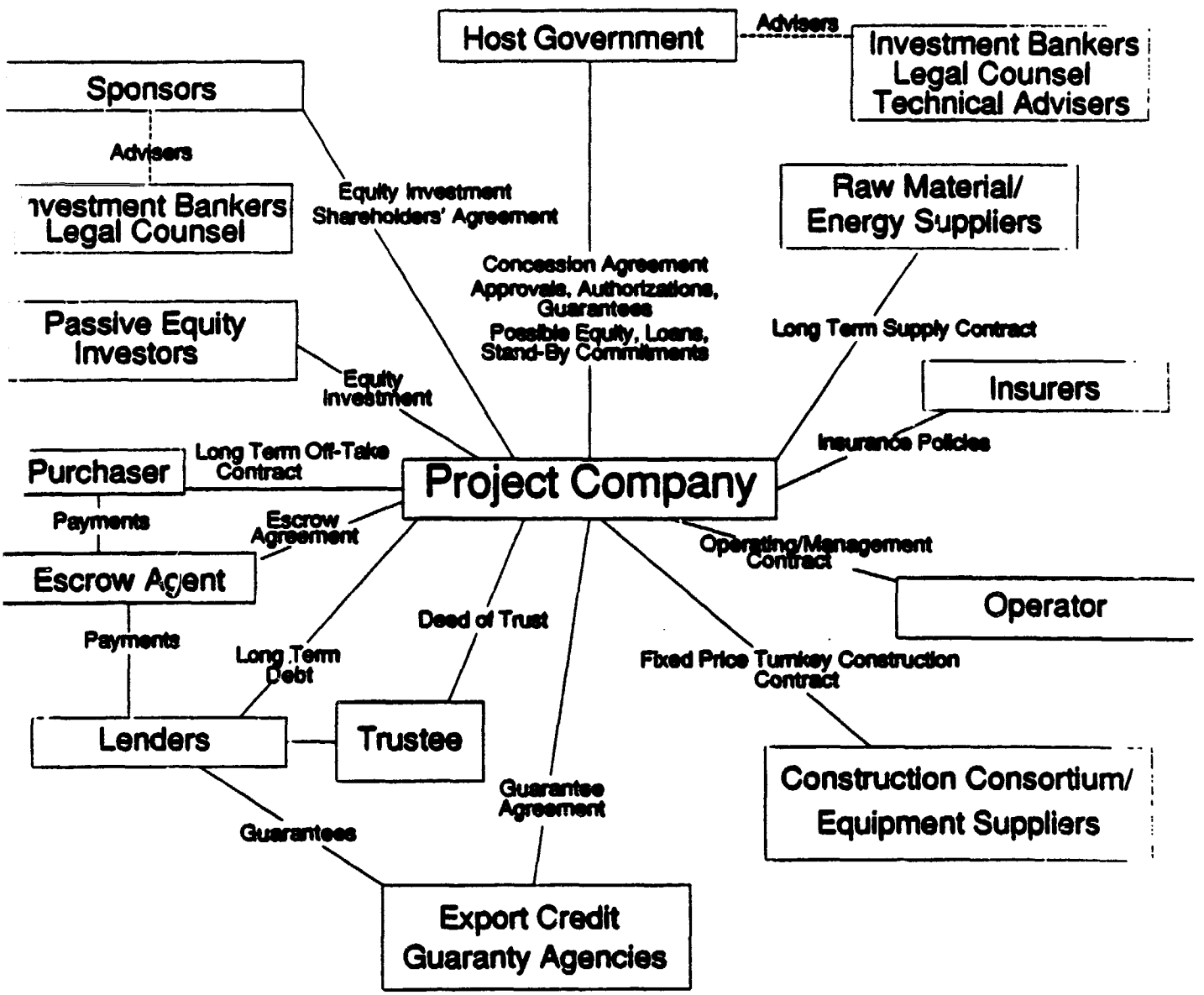
II. BASIC CHARACTERISTICS OF BOT PROJECTS

Although no two BOT projects will be exactly alike, there are generally a set of basic characteristics and a generic structure for a BOT project which can be summarized as follows. (Table I on the next page provides a schematic diagram for a typical BOT project.)

2.1 Host Government. The most important participant in any BOT infrastructure project is the host government. The host government must want the BOT project. A half-hearted commitment will not be sufficient. To no less degree than in a traditionally financed infrastructure project, the host government remains the ultimate client or purchaser of the project.

Table I

BOT PROJECT STRUCTURE



The host government will normally have to authorize the project in the first instance, which often will require special legislation and specific governmental approvals. The host government or one of its agencies will normally enter into an elaborate implementation or concession agreement with the project company which will spell out in detail the support to be provided by the host government and the rights and obligations of the project company. The host government may be providing part of the financing, either as debt, equity or on a standby basis. It or one of its agencies may be purchasing the output of the project or providing financial guarantees as to revenues. Finally, it will undoubtedly be called upon to provide all sorts of other types of support to the project. Thus, where developing countries and infrastructure projects are concerned, the BOT approach cannot be expected to result in a purely private sector venture which can be realized without substantial exposure or commitment on the part of the host government. The range of host government support normally required is discussed in greater detail in Chapter III below.

2.2 Sponsors; Project Company. The second essential ingredient for a successful BOT project is a financially strong, experienced sponsor, or group of sponsors, who will form the project company. The project company may own the underlying assets required for the project for the life of the concession or operate the assets under a form of lease. Sponsors usually form a consortium which includes a major international construction and engineering firm and one or more suppliers of heavy equipment. The consortium may include a separate firm interested in operating and maintaining the project under an operating contract.

The process of developing a BOT project is immensely complicated, time consuming and expensive. The Bechtel group, for example, claims to have spent some US$7 million over nearly five

years in its unsuccessful attempts to pursue, on a BOT basis, a power plant and a port project in Turkey. Kumagai Gumi reportedly spent the equivalent of some US$5 million in pre-signing costs on a toll road project in Thailand. Because of the high costs involved -- for feasibility studies, financial and legal advisers, travel expense, executive time, etc. -- sponsors interested in a BOT project must have patience and staying power. They should work out early in the process a cost sharing arrangement among the members of the consortium for the initial development costs.

Many sponsors who have been involved in BOT projects cite the need to form the project company at an early stage so that it, rather than one or more of the individual sponsors, can negotiate with the various parties which will be involved: the host government; the sponsors themselves acting as construction contractors, suppliers or operators; lenders; insurers; other equity investors; and so on. If the project company includes "independent" equity investors not otherwise engaged in the project (e.g., investment bankers, a multilateral or bilateral lending agency, or the host government) or a sufficient balance of interests, it may more easily succeed in acting independently of any one investor or sponsor and negotiating at arm's length with each of them.

An equity participation by the host government may be useful in this regard and may help the host government feel that the project is being negotiated fairly and with full disclosure. On the other hand, some promoters of the BOT concept believe that inclusion of the host government among the project company shareholders can lead to the sort of bureaucratic interference with project development and operations that "privatization" is supposed to avoid.

2.3 Financial Viability. The financial viability of a BOT project over its intended life must be clearly demonstrable to potential equity investors and lenders. This means that the project must have a clear and certain source of revenue that will be sufficient (a) to service principal and interest payments on the project debt over the term of the various loans and (b) to provide a return of and on equity which is commensurate with whatever development and long term project risk the equity investors are being asked to take. In the case of a power plant, the source of revenue will normally be a long term off-take contract with a government owned utility. In the case of roads, tunnels and bridges, the source of revenue will either be the tolls which can be generated (perhaps with a minimum level of traffic being guaranteed by the host government) or some sort of similar periodic payments by the host government or other users (e.g., railroads) based on future traffic. In the case of water distribution systems, the source of revenue may either be payments made by a government authority or direct sales to consumers.

Since the revenue must be sufficient to service the project debt, the total cost of the project must be reasonably predictable, and investors and lenders must have confidence that the project can actually be built and operated as planned. Normally plant and equipment will be provided and constructed on a fixed cost turnkey basis. Also, normally only proven technology will be used. Experimental techniques or untried, "state of the art" technology is less likely to be approved by lenders who are being asked to commit substantial sums on a limited recourse basis.

2.4 Local Partners. A number of participants in BOT projects have spoken of the advisability of including among the sponsors or equity investors in the project company a strong, well connected and well respected private participant from the host country. Such a participant might be a potential supplier

of civil works to the project, but also might be a strong local industrial, commercial or financial group. Such a local partner can help the sponsors better understand the local environment, better deal with the host government and better resolve local issues as they arise. A local partner can also provide needed logistical support during the development stage of the project.

2.5 Construction Consortium. At the heart of the typical BOT project is a large building job often involving the supply of considerable heavy equipment. Because of the need to assure equity investors and lenders that the project will be built on time and at an agreed cost, both the building contractor and the principal equipment suppliers will normally be companies of proven reliability, expertise and financial strength.

Often members of the consortium will come from a number of different countries. While perhaps not essential, this is helpful in two ways. From the host country's perspective, it assures that the project is an "international" one, rather than one which might appear to benefit a single, particular foreign country. This may make the project more acceptable politically. Having suppliers from a number of different developed countries also helps to attract financing supported by different export credit guarantee agencies, thereby spreading a risk which no one agency would be likely to take on entirely.

2.6 Financing. Most BOT projects proposed or agreed to date have involved a combination of equity provided by the sponsors and debt provided by commercial banks, international financial institutions and bilateral government lenders. The percentage of equity seems to fall most often within the range of 10% to 30%, although the equity component in some projects has been outside this range. It is entirely conceivable to have a BOT project without any substantial true equity, but rather with

various levels of senior and subordinated debt. The senior lenders (e.g., normally the commercial banks) will want to have a "cushion" to support their senior debt, but may not be too concerned whether that cushion is in the form of subordinated debt or equity. The host government will normally want to have some form of long term financial commitment from the sponsors through the operating period. The precise form of that commitment (subordinated debt, invested equity, equity in the form of deferred fees) may not be crucial. International lending agencies, however, are more likely to demand that a significant part of the financing be provided in the form of more traditional equity invested at the outset.

The proportion between foreign currency and local currency in both the debt and equity financing will depend on the nature of the project and the country involved. The ability of the local banking and securities markets to mobilize local capital or the availability of "blocked" local currency in existing external commercial debt which can be recycled in swap transactions may also influence the mix between local and foreign currency in any given project.

The financing for some BOT projects appears to recognize the fact that BOT projects tend to have two distinct phases, with different risks: first, a high risk construction phase, and, second, a lower risk, "public utility" operating phase. Both equity investors and lenders can be expected to seek different rewards and require different guarantees depending upon which of these two different phases they are investing in.

2.7 Security to Lenders. One of the key challenges to be met in a BOT project is how to provide adequate security to non-recourse or limited recourse lenders. An infrastructure project differs dramatically from the typical large commercial real

estate project well known in the United States in which non-recourse lenders will often consider themselves adequately secured simply by the right to foreclose on the project real estate, plant and equipment in the event of default. In the BOT context, non-recourse lenders rightly fear that, if the project company defaults, there will be no ready market for a partly built toll road or tunnel or a power plant that does not work. Various security devices, therefore, are typically found in BOT projects to protect the senior lenders. By and large, to the degree that these devices are designed to ensure that the project remains financially viable, and therefore performs as intended, these protections are also in the overall interest of the host government.

First, project revenues are usually collected in one or more escrow accounts, maintained by an escrow agent which is independent of the project company, for payment according to stipulated priorities. The lenders normally insist that from the beginning a special debt reserve escrow account be established, built up and maintained sufficient to pay senior debt service for a minimum period (six months or longer) before any distributions can be made to equity investors.

Second, the benefits of the various contracts entered into by the project company (e.g., the turnkey construction contract, performance bonds, supplier warranties, insurance proceeds, etc.) will normally be assigned to a trustee for the benefit of the lenders.

Third, lenders will probably insist upon the right to take over the project in the case of financial or technical default, well prior to the "bankruptcy" stage, and to bring in new contractors, suppliers or operators (depending upon the nature of the default) to complete the project. Juridically, this would

normally be accomplished by having the project company's equity owners pledge all of their stock as security for the loans. By foreclosing on the stock, the lenders would become owners of the project company.

Finally, as explained in more detail in Chapter III, commercial lenders and bilateral export credit agencies may insist on measures of government support, such as standby subordinated loan facilities, which are functionally almost equivalent to sovereign guarantees of project risk.

2.8 Transfer to Host Government. The typical BOT project requires that ownership be transferred to the host government at the end of the agreed concession period. What such "ownership" may consist of, and therefore what precisely needs to be transferred, will vary from project to project. In some cases, the project company will actually own the land, plant and equipment which make up the project. In others, it would appear that the host government may have retained "ownership" in the land and provided some type of leasehold interest to the project company. In that case, it might be more accurate to speak of the reversion of the underlying land to the host government, rather than a "transfer," although normally the improvements (i.e., plant and equipment) would still be "transferred."

The transfer may require a final payment to the equity investors from the host government. Such payment is likely to be based on financial criteria -- i.e., the amount required to provide the equity return to the owners which was originally negotiated (provided performance has been satisfactory) -- rather than on the then fair market value of the project. Such payment should also be conditioned on an inspection of the project property and certification that it has been properly maintained and is still in good working order. Where distributions to the

equity investors over the concession period are projected to be sufficient to provide both a reasonable return on and a return of the original equity investment, the final transfer could require only a token payment. In that case, the project company's obligations to maintain the project in good working order would have to be enforced in other ways, e.g., perhaps by yearly inspections and certifications as a condition to the continued right to operate.

There might also be a movable transfer date, with earlier transfer if the project company exceeds projections and realizes its full equity return earlier than expected, or a longer concession period if expected returns to the equity investors have not been reached because of factors beyond their control.

III. HOST GOVERNMENT SUPPORT

As indicated above, strong host government support, including most often a substantial financial commitment, appears to be an essential ingredient for the development and implementation of a BOT project. The discussion which follows highlights the areas in which such support may be required and raises some of the issues which host governments will be asked by sponsors and lenders to help resolve.

3.1 Political and Bureaucratic Support. The host government must provide powerful bureaucratic support to be able to resolve various regulatory and other issues as they arise. Normally a single person or department within the executive branch of the host country government must be prepared to act as a mentor for the project. The mentor must have sufficient political clout and bureaucratic ability to maintain continuing support over the life of the project and to override bureaucratic opposition. Such opposition often comes from the established public

sector entity which would otherwise build and operate the project (e.g., the government utility, public works administration, highway authority, etc.).

Another layer of complexity is added if new legislation is required from the host country's national parliament in order to implement the BOT project in question. In such a case, the chances for success will be greatest if the host government can obtain broad legislative authority and a delegation of powers to someone in the executive branch who can then carry through the development and implementation of the project. If BOT sponsors are required to lobby their own bill through a national parliament, the chances of ultimate success will be considerably diminished.

The host government must assign sufficiently trained and experienced personnel to understand the complexities of a BOT scheme and to be able to negotiate its terms. The government negotiators must be of sufficiently high rank and have sufficient authority to commit their governments or government agencies to the terms of the transaction in a timely manner. Otherwise, the negotiations are likely to drag on so long that the project may be abandoned. Even if it is eventually implemented, the delay will have imposed substantial lost opportunity costs.

3.2 Outside Advisers. Given the unusual technical, financial and legal complexities of BOT projects, host governments should retain at the outset competent outside technical, financial and legal advisers familiar with the types of private sector arrangements involved. The project sponsors will themselves have substantial technical expertise and will have experienced international legal counsel and investment bankers on their side of the negotiating table. No matter how experienced or sophisticated the government negotiators may be, by adding outside

technical advisers, investment bankers and legal counsel of stature to their team from the outset, the host government will normally be better able to structure the initial BOT proposal in the most favorable way for the government. The presence of such advisers will lend considerable credibility to the host government's negotiating position as the proposal evolves and should help to find creative solutions to problems which arise in the course of the negotiations. Although the cost of employing such outside advisers will be considerable, the resulting benefits in any significant BOT project will normally be well worth it.

3.3 Assured Supplies. In most BOT projects, the host government will provide some level of logistical support. For example, the government may provide the land on which the project will be built; road, rail or port facilities; transmission lines to take power from a power plant; raw materials and utilities under long term supply contracts; or even free supplies of energy (e.g., locally mined coal) over the life of the project.

3.4 Assured Revenues. Even more crucial, the host government will often be the sole purchaser of the output of a BOT project. For instance, in the case of power plants, the power will normally be sold into the government owned power grid. Since an assured revenue stream is essential to persuade both equity investors and lenders to commit their funds, the host government or its wholly owned utility will normally be required to enter into a binding long term agreement with the BOT project company to purchase power (or to pay for capacity) on a "take or pay" basis sufficient, at a minimum, to pay off the project debt and pay back the equity investors. Normally, the sponsors will insist that this off-take agreement be backed by the "full faith and credit" of the host government.

The formula for pricing the payments due under a power off-take agreement will vary. Turkey and Pakistan appear to have included in their proposed BOT projects a power tariff formula which starts with input and financing costs (subject to price escalation clauses over the life of the agreement) and derives a "cost plus" price for both a capacity charge per kwh and an additional kwh charge for energy actually taken. The Philippines, on the other hand, appears to be soliciting bids based on a flat rate per kwh for both a capacity fee and an energy fee to be set by the bidder. The implication is that the Philippines would then accept the lowest bid without negotiating precisely how the bid has been derived.

The problem is somewhat different where a BOT project will be selling its goods or services directly to the public rather than to the host government. In the case of a toll road, for instance, the senior lenders may be reluctant to take the risk that the volume of toll paying traffic will be too low to pay off the debt. The equity investors may also be reluctant to take significant risks in this regard, unless they are given a chance to reap significant rewards if traffic meets or exceeds projections. One solution to this problem is for the host government to agree to provide subordinated loans to the project company whenever toll revenues fall below a certain minimum. This seems to be the solution being used in the North-South Expressway project in Malaysia. The host government may have sufficient budgetary resources to be able to make such a commitment on its own. If this is not the case, a standby facility, such as the one in the power sector in Pakistan financed by a World Bank loan, might be needed to solve this problem. Another solution is to provide additional revenue to the project company from some other source, e.g., increasing revenue sharing from other sectors

of the toll road system. This is the solution apparently being proposed for the Bangkok Second Stage Expressway.

3.5 Loans; Equity Contributions. It is not incompatible with the concept of a BOT project to have the host government fund part of the project costs by direct loans to or an equity investment in the project company. In the case of the North-South Expressway in Malaysia, for instance, the government is providing a substantial support loan for ten years. In the case of a power project in Pakistan, the government was expected to provide a subordinated loan of up to 30% of the total estimated project cost. In the case of the proposed Gazi power project in Turkey,[1/] the government had proposed to take 30% of the equity in the project.

Opinion is divided as to whether having the host government as an equity partner in a BOT project is helpful. One view is that BOT projects should be completely privately financed and privately run. In this view, having the government as an equity partner is likely to bring undue government influence and lead to "bureaucratic" inefficiencies in management and operation.

The other view is that having the government as an equity partner may be quite helpful. It may help to make the project company independent of any one of its sponsors and better able to negotiate with its major shareholders for construction contracts and equipment supplies. It should help to convince the host government of the transparency of the project's financial structure (which may be needed as a quid pro quo for the government support being sought). It may make it easier for the government to allow

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1/ The Gazi project is used for illustrative purposes in this report, even though it now seems to have been abandoned, because substantial information about it was made public. See Annexes 2 and 3 for more details.

a reasonable return to the equity investors, with a reasonable system of penalties and rewards based on the degree to which the project meets or exceeds projections, when the government itself will share in such risks and rewards.

3.6 Earning Assets. A familiar feature of a number of BOT projects has been the contribution by the host government of existing assets capable of producing earnings which can be used to pay capital costs, debt service and operating expenses. To borrow examples from developed countries, in both the Dartford crossing project in the United Kingdom and the Sydney Harbor tunnel project in Australia, existing toll bridges or tunnels were made available to the project company by the host government so that the tolls could be used to finance the new project. Likewise, in the case of the North-South Expressway project in Malaysia and the Bangkok Second Stage Expressway project in Thailand, tolls from existing toll roads will be made available to the project company.

3.7 Regulatory, Fiscal and Other Support. There is a wide range of legislative, regulatory, fiscal and similar support which a host government should be prepared to provide to a BOT project. The government may have to provide basic legislative and regulatory authority for the project to be built and operated in the private sector, since often government monopolies will be involved. Special legislation may be required to authorize the private ownership and operation of power plants, toll roads, telecommunications facilities, airports, water works, and so on. The authority to acquire land for the project by eminent domain may need to be specially provided. These various authorizations may be provided by general legislation or by a "single purpose" law or decree providing all of the necessary powers and authorizations for the BOT project in question. As indicated above, the chances for success will be greatest if general legislative

authority can be obtained early in the process, with power being delegated for implementation to a responsible official who is prepared to act as the host government's mentor for the project.

To attract foreign equity investment and non-recourse debt financing, foreign investors have to be satisfied that the host country has an overall legal and regulatory system which is conducive to foreign investment. This normally presupposes an ascertainable and stable system of law, supported by a court system in which private party litigants can seek redress. For example, labor laws are required which allow private sector employers to hire and fire employees and workers on a reasonable basis at reasonable cost.

In the tax area, the host government will often make available to the BOT project a special regime. Standard features of such regimes are a waiver of local income tax on the project company for the concession period, a waiver of any withholding tax on interest and dividends paid to foreign investors and a reduction or elimination of local income tax on the salaries of expatriate personnel required to staff the project. The rationale for providing such tax benefits is that foreign investors will look at the returns they are seeking net of local tax. Thus any tax payable will simply increase the overall cost of the project which normally the government will be paying directly (e.g., in the power tariff) or indirectly (e.g., when a toll road project must charge higher tolls or provide a longer concession period to the project company). Similarly, the rationale for providing local tax relief for expatriate personnel is that the project company will normally have to reimburse expatriate personnel for the additional burden of local taxes. Such reimbursement will then become part of the overall cost of the project which, one way or another, will be passed on to the host government or the local public.

3.8 Project Risk. Most foreign lenders (and their export credit guarantee agencies) have been reluctant to accept any substantial project risk in BOT infrastructure projects in developing countries. The host government, therefore, will normally be asked to protect the senior lenders against the risk that their debt will not be serviced due to project failure. The solution which seems to be emerging for providing this protection, and which is a common feature of the coal fired power plant projects in Turkey, the North-South Expressway in Malaysia and other BOT projects, is for the host government to commit to make subordinated loans available on a standby basis over a certain period of time to provide for senior debt service when and if the project company's cash flow is insufficient for such propose.

3.9 Force Majeure. Force majeure risks which cannot reasonably be covered by insurance pose a dilemma. Foreign lenders will rarely be willing to take force majeure risks. Equity investors, unless they are offered considerably more upside potential than a 16% to 18% return, are also going to be reluctant to take force majeure risks, and will certainly not guarantee the lenders against force majeure risks except to the limit of their own equity investment. Thus some form of government support will normally be required to cover force majeure risks.

The standby facility which the Turkish government had agreed to in the Gazi project reportedly would have operated to cover shortfalls due to force majeure events as well as other cases of shortfall, but would have protected only the lenders, not the equity investors. In the Bangkok Second Stage Expressway project in Thailand, the government has apparently provided in the concession agreement for a number of "exceptional events," which would include uninsurable force majeure events, in which one or more remedies, as appropriate, would be available to allow both lenders and equity investors to recover their investments.

3.10 Inflation. Both lenders and equity investors will normally insist on some mechanism to protect themselves against inflation risk. This protection may be provided by price escalation clauses in the off-take agreement (e.g., in the case of power projects) or by provisions in the concession agreement allowing the project company to increase tolls (e.g., in a toll road project). Such price escalation clauses would attempt to take account of increased costs of the project due to inflation. They may also be drafted with the intent of maintaining the purchasing power of the project's net income and equity generally. Normally such protection is not complete. Price adjustments are allowed only periodically, lagging behind actual inflation, and may only be partial. The negotiation of the precise terms of the price escalation formulas in BOT projects will probably be time consuming and extremely detailed.

3.11 Foreign Exchange. Typically a BOT infrastructure project, which will be selling its output into the local economy, will receive its earnings in local currency.[2/] Both lenders and equity investors who have invested in foreign currency will want firm assurances that they will be able to recoup their original investment, together with interest or dividends, in the same or a comparable foreign currency, and that they will be able to do so at a reasonable exchange rate. The host government, therefore, must be prepared to provide some mechanism to assure the foreign investors (and their government insurance agencies) that they will be authorized to convert local currency earnings into foreign currency, that there will be enough foreign currency available when the time comes for the host country or its banking

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2/ Where a project will have foreign users who can be charged in foreign currencies, as in the case of airports or port facilities, this problem may be less severe.

system to make the conversion and that the rate will not be unduly unfavorable.

These issues have been resolved in different ways in recent BOT projects. In Turkey, for instance, for the Gazi project, the host government proposed that its power authority would make its periodic payments under the off-take contract in a basket of currencies, consisting of Japanese yen, German marks and U.S. dollars, designed to match the payments required to be made to different foreign lenders and investors. In another country, on the other hand, the government intends to rely principally upon an exchange risk insurance scheme operated by the Central Bank, with the premium (e.g., 3% per annum in the case of U.S. dollars) being an additional cost of financing and thus an additional cost to be covered in the power tariff. In return for the annual premium, the Central Bank guarantees that it will convert local currency earned by the investor into dollars at the exchange rate fixed on the date the insurance contract is entered into. If for any reason such insurance is not available, it appears that the government of this country has considered having the power tariff adjusted for exchange rate movements (actually for the greater of inflation or exchange rate loss).

The ratio of foreign currency to local currency to be invested in a BOT project will differ significantly from project to project. A power plant, because of the heavy equipment involved which usually must be imported, will normally require a relatively large proportion of foreign currency. In a toll road project, however, much of the investment can be made in local currency, if sources of financing are available. Thus the plans for the Bangkok Second Stage Expressway indicate that at most 10% of the needed investment might come from foreign currency loans. In such a situation, foreign exchange risk becomes more manageable and may not need host government support. In the Bangkok

project, for instance, it does not appear that any specific government support of exchange rates was required. In the North-South Expressway project in Malaysia, however, in which apparently a substantial amount of foreign currency borrowing is contemplated, the government has provided a 17 year external risk undertaking to cover increased costs from adverse foreign exchange movements and adverse interest rate movements on foreign loans to the project.

3.12 Sovereign Guarantees. Although host governments will not normally provide a sovereign guarantee for the loans made to a BOT project company, they will be asked to provide sovereign guarantees, or equivalent assurances, for some aspects of the project. For instance, if a government-owned corporation has contracted with the project company, as when a government utility enters into a long term off-take contract or undertakes the long term supply of fuel or energy to the project, the government itself will often be required to guarantee the utility's performance. Moreover, the basic concession agreement between the host government and the project company will normally contain numerous obligations undertaken by the host government which will be backed by its "full faith and credit."

3.13 Protection from Competition. Finally, the host government may have to provide some assurances as to the competitive environment in which a BOT project will operate. In the case of a toll road project, for instance, the project sponsors would normally want assurances as to any parallel toll or non-toll roads which might be built during the concession period. Even in the case of a power plant project, in which the government will be committed under a long term off take contract to take or pay for a certain minimum amount of power, the equity investors will normally be counting on making their profits from selling more than these minimum amounts. They will want some commitments,

therefore, from the host government as to how many other potentially competing sources of energy will be allowed to function during the concession period.

IV. RISK ALLOCATION

A BOT project has a number of identifiable risks. Some are reasonably within the control of one or more of the parties to the project. Others may not be within any party's reasonable control, but may be insurable, at a cost. Still others may not be insurable. The conventional wisdom in project financing generally is that each risk should be assumed by the party within whose control the risk most lies. Usually a party will insist on some reward commensurate with the risk undertaken. The typical risks in a BOT project are summarized below.

4.1 Completion Risk. The risk that the project will be completed on time and for the price stated is normally covered by a fixed price, firm date, turnkey construction contract with stipulated liquidated damages,[3/] often supplemented by performance bonds. The price of the turnkey project is, of course, increased by a risk factor to compensate the contractor for taking this risk. Completion risk is assumed secondarily by the project company, and indirectly by its equity investors, since their equity will be eroded to the degree that costs are increased due to delays or cost overruns which are not covered by damages from the contractors. Whether any completion risk will be assumed, at a third level, by lenders to BOT projects has been a vexing question.

3/ A liquidated damages clause attempts to set forth precisely in the contract the monetary damages payable by the contractor on account, for example, of each day of delay in completing the project, or for the completed project's failure to meet specifications.

As already indicated in Chapter III, commercial and certain bilateral lenders, and the export credit guarantee agencies which guarantee commercial loans, have been reluctant to assume completion risk. In several instances, as a condition to making their loans, they have required undertakings from the host government to make subordinated loans to the project company sufficient to guarantee senior debt service through project completion.

While BOT purists may argue that such standby commitments vitiate the private, non-recourse nature of the BOT approach, from the host government's point of view such contingent commitments may be the most economical alternative. For example, in theory, commercial standby subordinated debt financing might be arranged to take the place of a government standby facility. Any such financing, however, would surely require high interest rates and commitment fees to compensate for the risks being undertaken. It is also theoretically possible that some sponsors would agree to provide standby equity commitments to cover completion risk. As a practical matter, however, equity investors are likely to accept such a commitment only in exchange for substantial potential rewards. Venture capitalists in a private project of this nature in a developed country, such as the United States, would expect annual returns of 35% to 40% on equity for taking such risks. In a developing country, the potential returns would have to be even higher. Host governments probably will not want to pay this high a price. They may prefer, therefore, to supply the standby commitment themselves.

4.2 Performance and Operating Risk. The risk that the project will not perform as expected will be covered by warranties from the consortium of construction contractors and equipment suppliers and by performance guarantees in an operating and maintenance contract. In each case, these risks are substantially within the control of the parties assuming them. As with

completion risk, however, operating risk is again assumed secondarily by the project company. Whether lenders will assume any operating risk, which from their point of view becomes important only when operating or performance failures lead to interruptions in cash flow, is discussed in the next section.

4.3 Cash Flow Risk. As indicated earlier, lenders to BOT projects will insist upon elaborate escrow arrangements to cover forward debt service and to guard against possible interruptions or ups and downs in cash flow. Some lenders have been prepared, however, to lend on a fully non-recourse basis (i.e., non-recourse other than to the project company and its assets) to a project in its operating phase, once construction is complete and normal operations begin. For instance, in the proposed financing of the Gazi project in Turkey, the government's standby obligation to provide subordinated loans during construction and start-up would have fallen away after three years of successful operation (provided sufficient balances had been built up in the escrow accounts to cover forward senior debt service for approximately three years).

As an alternative to standby commitments from the host government, commercial insurance is available in the London market to cover cash flow risk in BOT type projects (see Section 4.5 below). The cost of such insurance would, however, become part of the overall cost of the project and would inevitably be reflected in higher revenue payments to the project company. In the case of a power project, for instance, there would be a higher cost of power to the host government in the off-take agreement. Thus a host government may find it more economical to bear this risk itself, if need be, through a mechanism such as a standby subordinated loan facility, rather than allowing a project company to obtain, and be reimbursed for the cost of, commercial insurance.

4.4 Inflation and Foreign Exchange Risk. Both equity investors and lenders to a project in a developing country will be concerned about the risks associated with inflation and foreign exchange. These investors will argue that such risks are totally beyond their control and should be the government's responsibility. In a typical BOT project, the potential rewards to lenders and equity investors will not be great enough to compensate them for taking either inflation or foreign exchange risks. Local investors may be content with protection only against inflation. Foreign investors will want protection against both inflation and adverse changes in exchange rates.

As indicated in Chapter III, the host government has often been prevailed upon to cover these risks. To cover inflation, the long term off-take contract (in the case of a power plant) or the agreement with the host government as to minimum revenues to be collected from the public (in the case of toll roads or a port) will normally provide for periodic adjustments in the price of the goods or services to be sold by the project based on some relevant index of local inflation. The host government will also normally be required to guarantee convertibility, the availability of sufficient foreign exchange and the exchange rate. As noted earlier, the precise mechanisms used to achieve these guarantees will vary.

4.5 Insurable Risks. A BOT project typically will have casualty insurance covering its plant and equipment, third party liability insurance, workmen's compensation insurance, and insurance covering other commercially insurable risks. It may or may not, depending upon the support which the host government is willing to provide, seek commercial insurance covering business interruption, interruption in cash flows and similar risks. In this connection, there are several new forms of insurance which have been developed by the London insurance market which might be

useful for BOT projects.[4/] One is a "funding" policy to cover cash flow shortfalls mainly in the pre-completion phase of a project. The other is a more traditional cost overrun insurance policy specifically adopted for BOT projects.

4.6 Uninsurable Risks (Force Majeure). Some risks (usually force majeure risks) are either not insurable at all, or not insurable at a reasonable cost. Commercial lenders and export credit agencies will normally be reluctant to assume the force majeure risks in a BOT context and will seek to have support provided by one or more of the other parties. Equity investors may assume the force majeure risks for themselves but normally will not be willing to protect the lenders against force majeure. The lenders, therefore, will normally insist that the host government provide some coverage for uninsurable force majeure events.

4.7 Political Risk. Both foreign commercial lenders and foreign equity investors in BOT projects will normally seek political risk insurance, either from their own export credit agencies or from such sources as the Multilateral Investment Guarantee Agency. Political risk insurance will normally include coverage for any breach by the host government of specific undertakings provided to the BOT project.

4.8 Commercial Risk Insurance. The United Kingdom's Export Credits Guarantee Department ("ECGD") recently announced a new optional addition to its traditional insurance for political risks. ECGD will now insure, in certain cases, up to 60% of the commercial risk of approved projects. As of early June 1989, however, of some 80 proposals received, only one had proceeded to

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4/ See South, "New Insurance Approaches to the Pre- and Post-Completion Risks in BOT Projects," in Legal Studies & Services Limited, The Second International Construction Projects Conference: Documentation (London, June 5 and 6, 1989).

an actual signed policy. Both the U.S. Export Import Bank and the U.S. Overseas Private Investment Corporation also have the authority to provide commercial guarantees up to certain limits.

It is not clear, however, to what extent such coverage will alleviate the need for host government support in the typical BOT context, since the export credit agencies will want their own assurances from host governments. For instance, it was the U.S. Eximbank which insisted on having the Government of Turkey provide for standby subordinated loans to the Gazi power plant project as a condition of Eximbank's proposed financing and guarantees.

V. NECESSARY CONDITIONS FOR FEASIBLE BOT PROJECTS

5.1 Legal Environment. The legal structure of a typical BOT project is complicated. This suggests that only developing countries with a fairly mature legal system will easily accommodate the BOT approach. The laws and regulations under which the BOT project operates must be readily ascertainable and must be compatible with the project's private nature. Private ownership of the particular type of infrastructure facility (power plant, toll road, telecommunications network) must be allowed by local law.

Private sponsors and lenders will want assurances that the basic contractual commitments to the BOT project both from the host government and from other private parties will be respected and can be enforced. In some instances, the reliability of the host country's own legal system may provide some of these assurances. Nevertheless, the essential contract documents -- both with the host government and among the other parties -- will almost always provide for international arbitration in a neutral jurisdiction and will specify a governing law which is familiar

and acceptable to the private sector participants. This may or may not be the law of the host country. Alternatively, special legislation may be sought to resolve specific issues which are not otherwise adequately covered by existing law.

5.2 Economic Environment. A BOT project will normally call for some proportion of local lenders and local equity investors. Finding such lenders and investors will be easier in a country which has a developed banking system and some sort of organized financial market. The fact that such markets exist to some degree in Thailand, Malaysia and Pakistan, for instance, appears to make it possible to attract equity from local sources for BOT projects in those countries.

Most BOT projects will derive their revenues from outputs priced in local currency which must often be used to pay for imported raw materials or fuel, as well as for debt service and equity reimbursement. Such projects will be more easily launched in an economic environment free of excessive inflation or unduly rapid exchange rate movements. Even if the host government is willing to protect investors in the project against both inflation and currency risk, it will be far easier to find mechanisms to do so in a relatively stable economic environment than in a highly unstable one.

5.3 Host Country Credit Rating. The BOT formula by no means eliminates consideration of the host country's overall creditworthiness as a major factor in the decision of both private and public lenders to finance a project in a particular country. The more host government support and guarantees are needed to make a project viable, the more lenders will be looking to the credit of the host country as well as to the project for eventual repayment. In the case of commercial lenders, and their respective export guarantee agencies, loans to a BOT project in a

particular country still count as loans to that country for purposes of exposure limits. For some countries, these limits may be exhausted, so that a particular lender or agency would not be willing to finance or guarantee any further projects in that country, whether or not a BOT formula is used.

Developing countries which still have a relatively strong credit rating -- for instance countries like Thailand and Malaysia -- seem to have a better chance of developing BOT projects than countries whose credit is not regarded as being so strong. Countries with intermediate credit ratings -- such as Indonesia, Turkey, Pakistan, Mexico, Chile and the Philippines[5/] -- may still be sufficiently highly rated to make BOT projects possible. Countries whose credit rating is regarded as being lower than those cited are less likely to be able to attract BOT projects until their rating improves.

In some countries, special factors may favor BOT approaches. For instance, the Philippines may benefit from a politically motivated desire on the part of some capital exporting countries to help the new democracy there. China seems to have benefited in the past from the willingness of commercial lenders to take rather unusual risks in order to enter a new market of enormous long term potential. Mexico and Brazil may be able to take advantage of the availability of substantial amounts of existing sovereign debt which can be "swapped" into new BOT projects.

5.4 Political Environment. Another necessary pre-condition for the successful implementation of BOT projects (which may already be taken into account in the country's credit rating) is the host country's political stability. Without political

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5/ This list is not intended to be exhaustive, but merely illustrative, and of course is subject to change.

stability, the extensive governmental support needed to implement a BOT project may not be possible. Even if promised, the promise would probably not be credible. Private sponsors will not be willing to spend the substantial amounts of time and money required to put a BOT project together, and then remain at risk for the 10 to 25 year periods which are typically required, if they cannot count on political stability and continuity over such period.

5.5 Sector Characteristics. In theory, the BOT formula could be applied to any sector of the economy. All that is required is that there be an assured source of revenue over the proposed project life. The revenue can come either from a government-owned purchaser (e.g., the government power authority in the case of a power plant), from commercial end users (e.g., airlines in the case of an airport, shipping companies in the case of a port facility) or from individual consumers (e.g., drivers on a toll road, subway riders, retail customers for water distribution). Part, or even all, of the proposed revenue could also come from direct government payments. For instance, if the government wanted to have an expressway built, without incurring what some observers have criticized as the inefficient burden of tolling, it could agree to pay for the expressway over time according to some formula based on road traffic.

The history of BOT projects to date, some of which is briefly sketched in Annex 2 to this report, indicates that the greatest interest in BOT projects has been in the power sector and in toll roads. Nevertheless, a number of other types of BOT projects have been implemented or are being seriously negotiated, including port facilities, airports, free trade zones, bridges, tunnels, metro systems, and water treatment plants and supply systems.

5.6 Cyclical Considerations. A major impetus for BOT projects in the early 1980s came from the general downturn in international construction work. Major contractors found themselves with large staffs and a dearth of projects. They were willing, therefore, in that particular economic environment, to spend considerable time and money in an effort to develop and promote projects. Furthermore, they agreed to become equity investors in those projects contrary to their prior practice.

There does not seem to be the same impetus today for this kind of involvement. A number of major U.S. engineering firms, for instance, have restructured their operations since the early 1980s, cutting their work force to less than one-fourth, at the low point, of their size when business was at its height. Business has now begun to pick up again, and U.S. firms are expanding. In the power sector in particular, but also in civil engineering generally, these firms see ample work in the immediate future in developed countries. As a result, they will probably be less willing than they were several years ago to put up with the complexities and risks of BOT projects in developing countries.

Whether the view of U.S. firms is shared around the world is not clear. It may be, for instance, that Japanese firms will still be as interested in BOT projects as previously. But the upturn in the business cycle for international construction work generally may be a significant constraint on BOT projects in the near term.

VI. COST ISSUES

One of the key questions for host governments and for their financial advisers, such as the World Bank, is whether the overall cost of a BOT project is higher than that of a project financed directly by sovereign borrowings and, if so, whether such higher cost is nevertheless reasonable in order to implement projects which could not otherwise be funded because of fiscal or budgetary restraints. If BOT projects cost more, the host government, or its citizens, will end up paying this higher cost one way or another: through a higher power tariff, higher tolls or water charges, a longer concession period or a greater sharing of revenues from existing assets. A full response to this question would require access to detailed financial information which is not publicly available. We understand that the World Bank plans to do a separate study of this question. The following observations are offered as a guide to issues which might be covered in such a study.

6.1 Cost of Senior Debt. On the senior debt side, a BOT project company's cost of borrowing could be expected to be slightly higher than a host government's cost of sovereign borrowing would be, since the creditworthiness of a sovereign borrower should, in theory, command a lower interest rate. To the degree that commercial lenders can obtain the support of government export credit guarantee agencies, however, the cost of senior non-recourse borrowings in BOT projects may not be that different from the cost of sovereign loans. Moreover, because of the equity component of a BOT project, there may be less senior debt overall than there would be sovereign borrowings in a project directly financed by the government.

6.2 Cost of Equity. The equity component of BOT financing will clearly be more expensive than long term sovereign debt.[6/] To compensate for the substantial project risk which equity investors will normally be taking, they will insist on a higher return than that sought by senior lenders. The host government does get some consideration for this higher cost, however. It gets the insurance benefit which the equity cushion provides to cover cost overruns during construction and operation. It also gets the technical benefit of the investors' long term commitment to the project.

The information we have been able to gather as to projected returns on equity in BOT projects is set forth in Table 2 on the next page. As the table indicates, BOT projects will often provide a system of up-side rewards and down-side penalties to equity investors, depending upon whether or not the project meets, exceeds or falls short of its projections. In BOT power projects in Pakistan, for instance, the Government has indicated a willingness to consider proposals which project an 18% return on equity at a plant utilization factor of 60-65%. If utilization increases to 75%, the rate of return to the equity investors would increase accordingly. The cost of power to the government in the latter case would also decrease significantly, so that both parties benefit. The risk/reward system negotiated for the Turkish Gazi project was reported to be much less attractive. Not only was the 16% base case return considered by one participant to be low to begin with, but apparently there were serious

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6/ BOT projects often have a layer of subordinated debt. This will be more expensive than the senior debt, but should be less expensive than equity.

penalties for failure to meet projections, without comparable rewards for exceeding projected performance.[7/]

An overall cost comparison between the BOT approach and a sovereign debt financing would have to take into account the potential effect of these adjustments. It should also put some monetary value on the "insurance" aspect provided by having equity investors or subordinated lenders in a BOT project, which would not be present in a sovereign debt financed project.

Table 2

REPORTED EQUITY RETURNS IN BOT PROJECTS

Project	Information Source	Projected Return on Equity
Pakistani Power Projects	Presentation of Mohammad Akram Khan, Advisor, Ministry of Water and Power, Government of Pakistan, London BOT Conference, June 1989	18%
Gazi Power Plant, Turkey	Stevenson, "The Turkish BOT Power Project Experience," May 1989	16%
Labuan Water Supply Project, Malaysia	Remarks of Mohamad Hanafiah Omar, London BOT Conference, June 1989	18%-20%
Bangkok Second Stage Expressway	BECL, Presentation to Investors, September 1988	3%-21%[8/]

7/ See Stevenson, "The Turkish BOT Power Project Experience," May, 1989.

8/ These are figures for the base case assumptions. The 3% return is for the first 10 years; it becomes 21% over the 31 year life of the concession.

6.3 Project Efficiencies. In deciding whether BOT projects are more expensive or less expensive to host governments than traditionally financed ones, one would have to consider the overall cost of the project rather than simply comparing rates of return on debt and equity. Proponents of BOT projects contend that the long term equity commitment required of BOT sponsors, as well as their control over design, construction and operation, will normally lead to significant cost efficiencies over what a comparable project, designed, built and operated by a public authority, would cost. Some government officials might contest this view. A definite answer to this question may have to wait until more experience is gained from successfully completed BOT projects.

6.4 Other Benefits. The analysis of the overall cost of a BOT project should also consider other potential benefits to the host country. The BOT approach may provide greater training benefits and more continuous transfer of technology (particularly, for example, in the case of a power plant project) than would be true for a government owned project. The private planning, development and management of the BOT project by the project company may save the host government considerable development, overhead and management costs which would be incurred if the government were fully responsible for the project. Finally, proponents of "privatization" believe that the private sector management and operation of an infrastructure facility over the life of the concession period will yield additional benefits not immediately measurable in cost savings -- e.g., in quality of services rendered, environmental protection, and modernization.

6.5 BOT vs. BOO. There is some question as to whether the "transfer" feature of a BOT scheme is necessary to meet a host country's objectives or whether in some cases a BOO (build, own

and operate) approach might not be preferable. The Philippines has recently asked that proposals for power plants be submitted in the alternative, as both a BOT project and a BOO project. A proposal on the latter basis might be significantly cheaper for the host government over the initial period, since the sponsors would in theory have "forever" to recoup their investment and to earn a reasonable return. Most private investors, however, do not give much weight to returns which are 15 to 20 years away. The typical BOT sponsors, therefore, may well want nearly the same total return over the first 20 years of a BOO project as they would want from a BOT project. In that case, there would not be any substantial savings to the host government from a BOO approach.

Moreover, as just noted, under the BOT approach host governments should benefit from the training and technology transfer which are implicit in the fact that the project must be transferred to government control at the end of the concession period, and the government should, therefore, have included in its agreement with the project company provisions to assure that it will have sufficiently trained personnel and access to technology to carry on the project thereafter. These benefits might be lacking in a BOO project. On the other hand, a BOO scheme might provide more incentive for the owners to maintain and refurbish the plant or other installation during the concession period, thereby saving the host government from having to take on that responsibility at the end of the project. Both in the case of training and technology transfer and in the case of maintenance and refurbishing, of course, the host government may be able to protect its interests sufficiently by contract, regardless of the form of the investment.

Finally, in the case of the BOT project, it would still be possible for the host government to negotiate an operating and

maintenance agreement with the project company after the initial concession period. Negotiating a new agreement for continued operations should be cheaper for the host government than merely extending the concession period, since there would no longer be any need for debt service or compensation to equity investors.

VII. PROCUREMENT ISSUES

As has been noted, developing and negotiating a BOT project is complex, time consuming and costly. Sponsors can be expected to spend the years of time and millions of dollars required only if the process for awarding projects is reasonably orderly and the chances for success, and thus the recovery of their initial investment, are predictable.

7.1 Unsolicited Proposals. Given the large amounts of money typically involved in a BOT project and the substantial measure of government support needed, it may be politically dangerous, as well as unwise as a matter of economic policy, for a host government to accept unsolicited proposals from a single sponsor without any evaluation or review of competitive alternatives. In a sector such as the generation of electric power or the construction of toll roads, however, such proposals can sometimes be evaluated on the basis of whether or not the proposed cost of power or highway construction is lower than the cost in similar government owned projects. Occasionally the cost might also be measured against the cost of existing BOT projects which themselves were selected by competitive bidding. Having such an external yardstick may be sufficient protection for the host government to obviate the requirement of competitive bidding in a particular case. In general, however, some form of initial competitive selection is probably preferable.

7.2 Competitive Bids. The normal procedure for awarding BOT projects should be similar to that for awarding public works projects. Ideally, a host government would itself identify the projects it wished to do on a BOT basis rather than simply responding to proposals. The government would define the project specifications, the level and nature of government support to be given, the proposed method for calculating the power tariff, tolls or whatever the source of revenue for the project is to be, the debt/equity ratio required and other parameters for the transaction. The government would then invite preliminary proposals. A preliminary winner would be selected on the basis of normal competitive criteria (price, experience and track record of sponsors, side benefits for the host country, etc.). A letter of intent would be signed with the preliminary winner, and negotiations would proceed to finalize the financing and the various agreements among the parties.

As indicated above, the sponsors of a BOT project will normally include a principal engineering and construction contractor, one or more major equipment suppliers, and a party willing and able to take on the operating and maintenance responsibility of the project.[9/] Their only reason for being sponsors and equity investors is to be able to provide services and equipment to the project. It is not realistic, therefore, to require a sponsor consortium, once tentatively selected to do a BOT project, to use international competitive bidding for the goods and services which the consortium members wish to provide.

Use of a preliminary award and then further negotiations pursuant to a letter of intent should make it possible for

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9/ The operator does not have to be part of the sponsoring consortium. On the other hand, the operator may in some instances be the same as, or an affiliate of, the principal contractor or one of the equipment suppliers.

potential sponsors to limit their expenses in the pre-letter of intent stage, when their chances of winning the project are highly uncertain. Once the letter of intent is issued, they can then commit the substantial additional time and resources needed for detailed feasibility studies and final negotiations with lenders, equity investors, suppliers, contractors and the host government with a reasonable degree of confidence that their project will go forward and that their investment can be recovered.

7.3 Integrity of the Process. There will always be some tension between the need to preserve the integrity of the competitive bidding process and a host government's desire to get the best possible price for any given project. The latter desire might lead a host government to continue to shop initial bids until it is certain that it has achieved the best possible price. If, however, a government becomes known for allowing upset bids to be made after initial bids are submitted, it is likely to find the initial bids on subsequent projects starting out much too high, as well as finding that some potential bidders will no longer want to participate in a bidding process that will lack credibility. The Turkish government may have fallen into this trap in its negotiations for major coal fired power plant projects. (See Annexes 2 and 3.)

VIII. ARGUMENTS FOR AND AGAINST BOT PROJECTS

Although this report does not come to any final judgment as to whether or not BOT projects should be encouraged, there are a number of arguments which can be made in favor of the BOT approach and at least two fundamental arguments against it.

8.1 Additionality. An argument often heard in favor of the BOT approach is that it is supposed to provide significant

"additionality." In cases in which a host government has neither the budgetary resources nor the borrowing capacity to finance an infrastructure project as a public sector project, the BOT formula, according to this argument, offers the possibility of realizing a project which would otherwise not get built. Financing "additionality" is provided in the form of the sponsor's equity investment, as well as, in many cases, passive equity and subordinated debt. In some cases, commercial banks may be willing to lend to a BOT project with a specifically tailored security package where they might not be willing to make new loans to the government itself. Governments which are actively promoting the BOT approach, such as Turkey, Pakistan, Malaysia and the Philippines, have cited this "additionality" factor as a principal reason for their interest.

The contrary argument is that commercial lenders and export credit guarantee agencies will be constrained by the same country risk limits, whether or not the BOT approach is used. Moreover, the high level of host government support which is required for a BOT project may displace other projects.

8.2 Credibility. A second argument in favor of the BOT approach is the credibility it provides. The willingness of equity investors and lenders to take on the risks associated with a BOT project and to make a long term commitment to the project are seen as practical indications that the project is considered to be viable by knowledgeable experts. A number of observers believe that the private sector will be better able to evaluate whether and how a particular project should be built than the public sector. The BOT approach, therefore, should save developing countries from "white elephant" projects which might otherwise be carried out as public sector projects. This benefit might be lost, however, if so much government support for a BOT project is provided that the sponsors bear no real risk.

8.3 Efficiencies. A third argument often cited in favor of BOT projects, which may be only a corollary of the second, is that the private sponsors' control of and continuing economic interest in the design, construction and operation of the project will produce significant cost efficiencies which will benefit the host country.

8.4 Benchmark. A number of government commentators have mentioned the usefulness to the host government of having a private sector project to use as a benchmark to measure the efficiency of similar public sector projects in the same country.

8.5 Technology Transfer and Training. The continued direct involvement of the private sector sponsors in a BOT project over the life of the concession period may promote a more continuous transfer of technology from the contractor, equipment suppliers and operator to the project company, and hence to the host government, than would be likely in a public sector project. A BOT project would normally also include a strong training program, so as to leave a fully trained local staff in place at the end of the concession period. Such training could, of course, take place without a BOT project, but the BOT scheme provides a context in which the presence of the foreign sponsors may facilitate such training.

8.6 Privatization. Finally, if one of the political and economic goals of a host government is to move its local economy as much as possible into the private sector, a BOT project will have obvious appeal over a project financed by public sector borrowings and owned and operated by host government bureaucracies.

8.7 Complication and Cost. The case against BOT projects rests primarily on two points, one incontrovertible, and the second open to discussion. It is incontrovertible that BOT projects

are highly complicated undertakings. They take money, time, patience and sophistication to negotiate and bring to fruition. The history of the Turkish negotiations for a major coal fired power plant, which is described in some detail in Annex 2 to this report, suggests that, from a host country's point of view, the lost opportunity costs of such a time consuming process are severe. If a developing country has the budgetary resources or borrowing capacity to do a project as a publicly financed project, therefore, it may be advisable to do so just for this factor alone. Likewise from a prospective sponsor's point of view, getting involved in the promotion of a BOT project must still be seen as a highly risky endeavor.

The second point often raised against BOT projects is that their overall cost to host governments is greater than a traditional public sector project. This point is contested by proponents of BOT's, who argue that the overall costs are in fact less when design and operating efficiencies are taken into account and the full cost of public sector alternatives is measured.

IX. WORLD BANK GROUP INVOLVEMENT IN BOT PROJECTS TO DATE

The history of the World Bank Group's involvement in BOT projects to date can be briefly stated as follows.

9.1 World Bank. The World Bank, by its charter, is limited in its lending activities to making loans to sovereign governments or loans that are covered by a sovereign guarantee. Thus, it has not been able to lend directly to BOT projects, none of which so far has carried a sovereign guarantee. The World Bank has found indirect and creative ways, however, to assist its member countries in implementing BOT projects.

In Pakistan, for instance, the World Bank played a key role in establishing a US$520 million Private Sector Energy Development Fund (the "PSEDF"), which is intended to make long term loans to finance up to 30% of the cost of qualifying projects, including BOT projects, in the energy sector. In the Philippines, an energy sector loan from the World Bank is intended to be used by the Philippines government and its government agencies in part to fund investments or standby facilities for BOT projects.

Another way in which the World Bank helps its member countries carry out BOT projects is by conducting sector studies. These studies have been done for the power sector in Turkey, Pakistan and the Philippines. They have helped to identify the need for and to determine the feasibility of BOT power plant projects in these countries.

In addition, the World Bank is currently studying various measures under the general heading of "Expanded Cofinancing Operations" which might be used to facilitate BOT projects. These measures include providing World Bank guarantees for commercial bank loans and local bond issues.

9.2 IFC Involvement. Although IFC has apparently considered participating in a number of BOT projects, as of early October 1989 it had still not committed to any. IFC can support BOT projects at three different levels. It can invest equity, provide direct loans and underwrite or syndicate commercial bank loans. It can also perform studies for host governments on the need for various projects. Finally, it can act as a paid financial adviser to host governments. Some of the projects which IFC has reportedly been considering are referred to in Annex 2.

X. FUTURE ASSISTANCE TO HOST GOVERNMENTS

The foregoing discussion should make clear that there are a number of areas in which the Bank and IFC, if they wish to encourage BOT projects in the developing world, can provide significant assistance to host governments. The World Bank's newest affiliate, the Multilateral Investment Guarantee Agency ("MIGA") may also play a role in this area.

10.1 Education. First, given the complexity of most BOT projects and the sophisticated legal and financial concepts involved, the Bank or IFC could help to explain to host governments what a BOT project is, its possible advantages and disadvantages and the kinds of government support that may be needed.

10.2 Advisers. If a host government decides to pursue one or more BOT projects actively, we believe it is essential that the government hire early in the process a qualified financial adviser and experienced legal counsel to advise and represent the government in both the selection process and in negotiations with potential sponsors. An outside technical adviser, with experience in the sector involved (e.g., power plants, roads, airports, subways, etc.) should also be added to the government team. The Bank or IFC should encourage host governments to make use of such advisers, could provide lists of recommended advisers and may be able to provide funding to pay for them.

10.3 Identification of Projects. The Bank can be of significant help to developing countries in analyzing their needs for infrastructure projects and sorting out priorities. The Bank can perform (or finance) sector studies and feasibility studies and help host governments identify specific projects to meet their general needs. If the decision is made to attempt to do a

project on a BOT basis, the Bank or IFC can advise the host government as to how to frame the request for proposals.

10.4 Evaluation of Proposals. Given the Bank's extensive experience with large construction projects generally, and the growing experience of both the Bank and IFC with BOT projects, each can play an important role in counseling and advising host governments during the negotiating process. As their familiarity with BOT projects grows, both the Bank and IFC can help by offering tested solutions to recurring issues.

10.5 Establishment of Local Regulatory and Financial Infrastructure. As indicated above, BOT projects are more likely to be feasible in environments which have a legal and regulatory framework favoring private foreign investment. The Bank can be helpful in focusing the attention of host governments on these issues. It may be able to provide funding for the host governments to enlist outside advisers in shaping such programs.

BOT projects also seem more likely to be successful in developing countries which have a reasonably strong local banking network and established local financial markets. The ability to tap local private investors in Thailand, Malaysia and Pakistan seems to have facilitated the implementation of BOT projects in those countries. The Bank's current efforts to strengthen those sectors in developing countries generally may, therefore, be of particular benefit to future BOT projects.

10.6 Direct Involvement. Both the Bank and IFC should also be able to play direct roles in BOT projects by providing or arranging necessary financing. IFC, as noted earlier, can invest directly in the equity of a BOT project company, can lend directly to such a company and can put together a syndicated loan from commercial banks. The Bank, although restricted by its

charter to sovereign lending, can still play a leading role in providing financing for BOT projects. The PSEDF in Pakistan and the energy sector loan in the Philippines have already been cited as examples of significant Bank contributions. With or without a fund of this nature, the Bank may provide direct loans to host governments to participate in the financing of a BOT project. The Bank might also provide a standby line of credit to a host government to back up the latter's contingent commitments to BOT projects. Other possibilities may exist under the "Expanded Cofinancing Operations" currently being developed.

The Bank could lend directly to BOT projects if the host government would provide a sovereign guarantee. As this report has attempted to show, in the case of infrastructure projects in developing countries, there is no such thing as a "pure" BOT project without extensive host government support. A false sense of doctrinal purity, therefore, should not prevent host governments from examining this possibility.

10.7 MIGA. The purpose of MIGA, the newest member of the World Bank Group, is to encourage foreign investment in developing countries by offering political risk insurance. This insurance protects foreign investors against occurrences such as adverse changes in exchange control laws; expropriation; war, revolution or civil disturbance; and repudiation or breach of contract by the host government. Forms of foreign investment that can be covered by this insurance include equity, loans and loan guarantees.

There are certain limitations, however. Although MIGA can insure up to 90% of the investment amount, it is subject to a per-project, per-coverage limit currently set at US$50 million. This limit may be too low to be of much use in the typical BOT infrastructure project. Also, the duration of a contract

guarantee will typically be for a maximum term of 15 years, although occasionally the term may be extended to up to 20 years. Many BOT projects run for longer than 20 years.

In addition to its guarantee program, MIGA is apparently prepared to provide advisory services to developing member countries to improve their attractiveness to foreign investment. This program is designed to support and reinforce the guarantee program. MIGA's participation in a BOT project through these interrelated programs might enhance confidence that an investor's rights will be respected by a host country.

XI. CONCLUSION

The BOT formula for infrastructure projects in developing countries is by no means a panacea. BOT projects are exceedingly complex from both a financial and a legal point of view. They require an extended period of time to develop and negotiate. If the same project can be implemented in a more traditional way -- i.e., with a turnkey construction contract financed by sovereign borrowings -- the time savings, together with the greater certainty of having the project go forward, may warrant pursuing the traditional approach.

If, however, a country is not able, or for budgetary or policy reasons prefers not, to finance all of its needed infrastructure on the basis of budgetary resources or sovereign borrowings, the BOT approach is an option to be considered. In the right context, it appears to be workable. Moreover, as the basic structure of BOT projects becomes better understood, and as standard solutions to the various issues posed become more accepted by host governments and in the marketplace, BOT projects should become somewhat easier to negotiate and implement.

A BOT project appears to provide some "additionality" in tapping sources of private sector financing which otherwise might not be available. The sponsors' commitment of substantial equity to a project assures that they will also remain committed to the project's successful operation over the concession period. Their "at risk" investment provides a strong incentive to have the project perform above its minimum expectations. Likewise, having the design, implementation and operation of a BOT project largely in the hands of the private sector may provide economies and efficiencies that will balance out or even outweigh the higher financing costs of non sovereign borrowing and equity investment.

A host government which wishes to promote BOT projects, however, must understand and be willing to accept the complexity and time consuming nature of the process, the extensive host government support which will have to be provided, and the rates of return which commercial lenders and private sector equity investors will expect. With that being understood, the BOT approach appears to be a useful possible alternative to the conventional financing and operation of infrastructure projects in developing countries.

ANNEX 1

BOT INFRASTRUCTURE PROJECTS IN DEVELOPING COUNTRIES REPORTED IN THE PRESS: A PARTIAL LIST

COUNTRY	PROJECT	STATUS
China	Sharjiao coal-fired power station in Guangdong	Operating
	Huaneng power project	Unknown
	Superhighway project	Unknown
Costa Rica	Road maintenance outside San Jose	Unknown
Cote d'Ivoire	Water distribution	Operating
Gabon	Manganese Ore Terminal	Proposed
Indonesia	Toll roads	Unknown
	Nuclear power plants	In negotiation
Malaysia	North Kelang Straits Bypass (toll road)	Operating
	Kepong Interchange (toll road)	Operating
	Labuan water supply pipeline and treatment plant	Operating
	Labuan-Beaufort submarine electric cable	Under construction
	Kuala Lumpur Interchanges	Under construction
	North South Highway	Under construction
Oman	Manah gas turbine power plant	Proposed
Pakistan	Hab River power plant	Contracts signed
	Fauji Foundation power plant	Letter of Intent
	Habibullah-Siemens Consortium power plant	Letter of Intent
Philippines	Metro-Manila power plant	Under construction (Hopewell)
	International container terminal	Proposed
	Construction and operation of private commercial ports	Proposed
	300 MW coal fired power plant	Request for proposals issued

COUNTRY	PROJECT	STATUS
Singapore	Mass Rapid Transit	Unknown
Thailand	Bangkok Second Stage Expressway	Under construction
	Bangkok Metro	In negotiation
Turkey	Akkuyu nuclear power plant	Abandoned
	1000 MW coal fired power plant	Contracts signed
	Additional coal fired power plants	Proposed
	Hydro power plants	Under construction(?)
	Bosphorus Second Bridge	Under construction (non BOT)
	Bosphorus Third Bridge	Abandoned
	Bosphorus tunnel	Proposed
	Istanbul Airport	In negotiation
	High-speed rail link between Istanbul and Ankara	Proposed
	Water plant (Izmir)	Abandoned
	Ankara Metro	Proposed
	Toll roads	Proposed
	Port facilities and free trade zones	Proposed

REVIEW OF SELECTED MAJOR BOT PROJECTS

In spite of the considerable interest which the BOT formula has aroused in recent years, and the fairly substantial number of specific BOT infrastructure projects which have been proposed, and in some cases extensively negotiated, there seem to be relatively few such projects in developing countries which have managed to get to financial close and to have entered the construction phase, let alone being successfully completed. To review all of the BOT projects which have been proposed would be an impossible task because of the lack of reliable information publicly available. This annex, however, will review briefly the history of BOT projects in some of the countries which have been most interested in promoting the BOT formula.

China

One early BOT project, which was started in 1984 and has been operating successfully since 1987, involves a 700 MW coal fired power plant at Sharjiao in Guangdong Province, China. This project was built by a consortium led by the Hopewell Group of Hong Kong and largely financed by a syndicate of commercial banks put together by Citicorp. A Chinese government agency agreed to supply coal at a fixed price for the entire concession period and to purchase electricity up to 60% of design capacity for the same period.

China has been reported to be contemplating a number of other BOT projects, but our information is sketchy as to which are actually going forward. One factor which seems to have helped the Sharjiao project was the willingness of commercial banks to accept substantially greater credit risks than is normal in this type of project finance, presumably because of a desire to make a political gesture toward the PRC, and perhaps in an effort to gain entry into a new market with enormous potential. These factors are not normally present and may no longer be true even for China. This initial Chinese BOT project, therefore, is not regarded by commercial bankers as a model to be followed elsewhere.

Turkey

One of the first countries to conceive of the BOT approach to traditional infrastructure investments was Turkey. In the late 1970s, under the leadership of the Prime Minister, Turgut Ozal, and his younger brother Yussuf Ozal, a former employee of the World Bank and then head of Turkey's State Development Organization, Turkey sought to have a 1,000 MW nuclear power plant at Akkuyu built on a BOT basis at a cost of some US$652 million. A

joint venture utility (the "JVU"), comprised of the contractor and the government-owned Turkish electric authority ("TEK"), was to finance, build, own and operate the plant for 15 years. During that period, TEK would purchase the plant's generated electricity from the JVU at fixed prices. At the end of the 15 years, the plant was to be turned over to the Turkish government.

Despite years of protracted negotiations between the Turkish government and the principal bidders for the project, Atomic Energy of Canada Limited and Kraftwerk Union of West Germany, this project was never implemented. Apparently the parties were unable to reach agreement on a satisfactory distribution of risks. On the one hand, the Turkish government took the position that under the BOT formula the government should not have to provide a sovereign repayment guarantee for the external debt to be taken on by the JVU, a guarantee for the purchase of a minimum amount of electricity, or exchange rate or convertibility guarantees which the project sponsors and lenders were seeking. On the other hand, in the absence of these guarantees from the Turkish government, neither the West German nor the Canadian export credit guarantee agency was willing to provide its guarantees for the sponsors' proposed investments or the contemplated export credits. Thus neither the sponsors nor the commercial lenders were willing to proceed.

Although the Akkuyu nuclear power plant project was never implemented, the Turkish government, as well as individual municipal governments in Turkey, continued to seek other BOT projects. These included a number of coal fired power plants (discussed in more detail below), the building of a 1.6 mile road tunnel under the Bosporus, several port facility and free trade zone projects, a proposed expansion of the Istanbul airport, a high-speed rail link between Istanbul and Ankara, the development of a metro rail system for Ankara, a second and third bridge over the Bosporus, a number of small hydroelectric power stations and the construction of various toll roads.

Information is sketchy as to how many of these projects are going forward.10/ In the past, numerous agreements have been announced with respect to projects which have then fallen apart. Exemplary in this regard is the history of Turkey's attempt to obtain one or more large (±1,000 MW) coal fired thermal power plants. The history begins at least as early as September 1984 when the Turkish government asked the Bechtel group to carry out a pre-feasibility study for a 600 to 1,000 MW plant to be financed and built on a BOT basis. Bechtel's pre-feasibility

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10/ Attached to this Report as Annex 3 is a note prepared by Jean-Jacques Lecat of Bureau Francis Lefebvre which provides additional details about many of these projects.

study was positive. Bechtel was then asked by the government to present a formal proposal. The proposal was submitted in September 1985. It called for a US$1 billion, 960 MW plant to be built at Tekirdag on the Sea of Marmara west of Istanbul. The Bechtel consortium included Combustion Engineering of the United States, which was to supply the steam generator plant, and Kraftwerk Union which was to supply the turbine generator sets.

The project contemplated the formation of a private Turkish company to be owned 70% by the various sponsors (U.S., German and Japanese) and 30% by TEK, the Turkish government owned utility. TEK would agree to purchase electricity from the project company on a take or pay basis over the life of the project. The power tariff was designed to be sufficient under "base case" performance assumptions to pay off the project debt and to provide a reasonable return on the equity. According to Bechtel's proposal, the power tariff was expected to yield a "base case" internal rate of return to the equity investors of 20% per annum. It also provided some upside potential for better than "base case" performance, some protection for higher than anticipated inflation and some relief in the case of force majeure events.

A key feature of the power tariff was that TEK agreed to make its payments in a basket of currencies in proportion to the currencies required for the debt service payments due to lenders and the projected returns to the equity investors. This feature, although highly complex to work out in practice, dealt effectively with several major concerns which are typically present in a BOT project, namely foreign currency convertibility and exchange rate risk. The Turkish government also agreed to provide a sovereign guarantee of TEK's obligations and certain traditional foreign investment incentives, most notably relieving the project company of any obligation to pay Turkish corporate income tax.

An impasse was reached, however, between the Turkish government and the United States Eximbank. The government, in line with its view of the BOT concept and the stance it had taken in the Akkuyu project, did not want to provide any payment guarantees to cover the project debt. Eximbank wanted an unconditional sovereign guarantee for its large proposed loan to the project company. Negotiations between the government and Eximbank over this issue dragged on over 18 months. During this period, the government was approached by other sponsor groups, which were then encouraged to submit alternative proposals for other sites in the same size and cost range as the Bechtel proposal. The Turkish government apparently hoped that other export credit agencies would be more flexible than Eximbank and would agree to take some of the project risk, thereby putting pressure on Eximbank to do the same.

In January 1987, in the Bechtel negotiations, a compromise was finally reached on the loan security issue. The Turkish government agreed that if revenues generated by the power off-take agreement were not sufficient to service the project debt at any time until the project became fully operational (defined as three years of successful operation), the government would make subordinated loans to the project company to cover the shortfall. Eximbank accepted this compromise as functionally equivalent to a sovereign guarantee.

With this major issue resolved, the Turkish government announced it wanted to proceed with three coal fired plants and invited proposals from six different sponsor groups. In September 1987 the government ranked the various bidders based on the estimated power tariffs under each proposal. The first ranked group, which would be entitled to be the first project to proceed, was a consortium led by Seapac Control Services Pty. Ltd. of Australia. It included a major Japanese contractor, Japanese and U.S. equipment suppliers, and the Queensland, Australia government which was to supply the coal for the project. The proposed plant, to be built at Gazi, also on the Sea of Marmara, was slightly larger (3 x 350 MW) than the plant proposed by Bechtel. Its configuration had a major advantage over Bechtel's, in that it could still meet its minimum output projections even with one unit partially down, whereas Bechtel's 2-unit configuration probably could not. The projected cost was US$1.4 billion. The equity investors, who were to finance about 20% of the project, were the Turkish government, for about one third of the equity, and Seapac, the Queensland government, TEK, the Japanese group (Chiyoda, Marubeni-Hitachi, Mitsui-Toshiba and Tokyo Electric-Tepsco), Westinghouse, IFC and others for the balance. The debt financing was to come from, among other sources, U.S. Eximbank, Japanese Eximbank, various Australian sources, commercial lenders (with export credit guaranties) and IFC.

The government of Queensland, however, soon withdrew its support, and Chiyoda and Westinghouse took over the leadership of the consortium. The Turkish government spent the first half of 1988 going through round-robin negotiations with the other sponsor groups, playing one off against the other, apparently in an attempt to get the lowest possible power tariff. In the course of these negotiations, the return to the equity investors under the "base case" performance assumption was cut to 16%, with virtually no upside for better performance, but severe penalties for failing to meet the base case. Moreover, protection for higher than expected inflation, relief to the equity investors for force majeure events or delays, and the ability to recoup losses in the early years by better performance in later years all disappeared from the deal.

At the end of this process, in August 1988, the Turkish government returned to exclusive negotiations with the consortium now led by Chiyoda and Westinghouse. The total project cost had been reduced to US$1.3 billion and there had been some changes in the ranks of both the lenders and the equity investors. The Chiyoda consortium apparently had continued to meet or beat the concessions offered by the other sponsor groups. Bechtel at this point withdrew from further negotiations. By June 1989, the Chiyoda consortium had reportedly reached final agreement with the government on all points. Financial close for the Gazi project was expected between July and September.

A month later, however, the Gazi project had been put on hold by the Turkish government. In late October, the government announced that it had signed an agreement in principle with one of the other competing sponsor groups, a Japanese consortium led by Electric Power Development Corporation, for a $1.3 billion MW coal fired power plant at Aliaga.

The tortured negotiating history described above suggests that the BOT approach has not been a wholly satisfactory solution to Turkey's power needs. Even if the Aliaga project is able to reach financial close and to start construction by April 1990, as currently proposed, the scheduled completion of the plant is not until sometime in 1993, nearly ten years from the government's original request to Bechtel for a pre-feasibility study. Yet the World Bank had determined in a 1985 study that Turkey would have to add a 1,000 MW plant each year for ten years, starting in 1990, to keep up with the expected growth in demand for electric power. Even if the Aliaga project now goes forward on schedule, therefore, the lost opportunity cost of failing to come to an agreement much earlier with one or another of the bidders may far outweigh the potential savings which the Turkish government may realize from having negotiated a lower power tariff.

Other BOT projects in Turkey have also had a troubled history. For the Ankara metro project, for instance, a consortium led by Canada's Urban Transit Development Corporation ("UTDC") was originally selected more than three years ago. Later the agreement with UTDC was abandoned and Turkey began negotiating with a consortium led by Bouygues, of France, only to announce in October of this year that a new agreement had been signed with UTDC. Negotiations over the Istanbul airport expansion project have apparently been going on for several years with the private parties feeling they are getting nowhere. As one news report put it recently, "many foreign negotiators are getting tired of receiving a green light from one ministry, a yellow from a second and then encountering a roadblock from the lower echelons of the state bureaucracy." Engineering News Record, Vol. 223, No.19, p.51, November 9, 1989.

Malaysia

In contrast to Turkey, Malaysia over the course of the last several years has actually completed construction of three BOT projects and has three others under construction, although only one is comparable in size to the Turkish projects. Those completed are two toll road projects -- the North Kelang Straits Bypass at a cost of US$20.5 million and the Kepong Interchange at a cost of US$86 million -- and a project involving a water treatment plant and a submarine pipeline to the island of Labuan at a cost of US$126.5 million. The Labuan-Beaufort Interconnection, involving laying a submarine cable for electricity, at a cost of US$80 million, is under construction. Two more toll road projects, the Kuala Lumpur interchanges (expected to cost US$300 million) and the remaining unbuilt portion of the North-South Expressway (expected to cost a further US$3.5 billion), are also being implemented.

Although Malaysia's BOT experience, therefore, seems to have been positive, outside observers have raised a number of criticisms of the major project, the North South Expressway. It has been suggested, for instance, that the government's initial reluctance to provide a reasonable "security package" deterred truly private sponsors from bidding on the project. The eventual sponsor was a firm largely owned by certain officials of the Malaysian government. The firm did not have a proven track record or strong financial standing. In the end, the Malaysian government did provide an extensive security package, including government loans, traffic volume guarantees, exchange rate guarantees, and guarantees against various events of force majeure or government action.

Thailand

Thailand is reported to be close to completing a major BOT infrastructure project, the building of a 30 kilometer toll road outside Bangkok, known as the Second Stage Expressway, which is to be operated by a private company. This 25 billion baht (US$1 billion) project is based on a toll concession which is expected to run for 30 years beginning on March 1, 1990. The project is under the direction of the Expressway Rapid Transit Authority of Thailand ("ETA"). ETA is a state enterprise formed in 1972 for the primary purpose of implementing tolled expressways and mass transit systems in Thailand.

The financing, building and operation of the Second Stage Expressway has been given to the Bangkok Expressway Company, Limited ("BECL"), a company incorporated in Thailand and majority owned (approximately 2/3) by Kumagai Gumi Company, Limited, a major Japanese engineering and contracting firm. The remaining equity ownership is expected to be spread among various Thai

institutional investors and some international financial institutions. IFC and the Asian Development Bank were invited to participate. At a later stage, once the project becomes operational, BECL intends to sell shares to the public, partly new shares and partly a sale of Kumagai Gumi's existing shareholdings, reducing the latter to approximately 30% of the equity.

Compared to the time which has been taken to negotiate the various Turkish BOT projects referred to above, the negotiations in Thailand have been fairly rapid. In February 1988, BECL and Kumagai Gumi formed a consortium known as Bangkok Expressway Consortium ("BEC") to prepare, submit and negotiate (if selected by ETA) the terms under which BECL might be awarded the project. It is not clear whether this was an unsolicited proposal or a response to a request issued by ETA. In April, BEC was invited by ETA to begin negotiations. In late July, BEC/BECL was advised that ETA would recommend to the Thai Cabinet that BECL be awarded the project, subject to the execution of a binding agreement. On September 20, 1988, the Cabinet approved the award of the project to BECL, subject to final approval of the agreement by the appropriate government department.

In order to finance the estimated 25 billion baht (US $1 billion) necessary to build the project, according to a September 1988 "Presentation to Investors," BECL was attempting to get 5 billion baht ($200 million) of equity subscription commitments and 20 billion baht ($800 million) of committed senior debt with recourse solely to BECL and its assets. The loans were expected to come primarily from commercial banks in Thailand and from multilateral and bilateral governmental lending institutions. In addition to offering BECL's assets as security to lenders for repayment of their loans, a bond pool containing performance bonds guaranteeing the obligations of the trade contractors under the major trade contracts was to be established.

The Thai government has taken a number of steps to facilitate the implementation of this project. First, it agreed to share with BECL, according to a revenue sharing formula, revenues from the existing government built toll road system. It issued a decree enabling ETA to acquire the land necessary for the building of the new expressway and caused the expressway concession to be placed on the eligible list for investment privileges. Such privileges include an eight year corporate income tax relief period, commencing from the first date that revenue is earned, and tax exemptions on dividends.

The government has also provided that, in the event of "exceptional occurrences," BECL would be entitled to delay the implementation schedule and would also have recourse to certain other remedies. Such remedies include one or more of the

following: an adjustment in the revenue sharing proportions; an increase in tolls on the system; an extension of the duration of the revenue allocation percentage then in effect; and an extension of the overall concession period of the project. The "exceptional circumstances" which could lead to such remedies include material increases in interest rates, material economic dislocation in Thailand, material delays in the relocation or diversion of utilities, government action or inaction (including undue interference with the execution of the project), unanticipated adverse ground conditions, significant disruptions in the local construction and building materials industry, and non-insurable events of force majeure.

Thailand has also been negotiating with a consortium led by Canada's Lavalin for the construction, on a BOT basis, of "Stage One, Phase One" of the Bangkok metro, at a cost of Can US$2 billion (US$1.6 billion). Lavalin has assembled a sponsor group led by Lavalin International (its international marketing and financing subsidiary) and the Urban Transit Development Corporation (another subsidiary which designs and builds railway rolling stock). The consortium includes Mitsubishi Corporation, Mitsubishi Heavy Industries, a group of Thai companies, and financial backers Morgan, Grenfell and Thai Farmers Bank. According to press reports, competition for this project was stiff between Lavalin, a group called the Asian European Consortium and the Sanko Japanese consortium. In the end Lavalin won, reportedly because it offered a more balanced package of technology, operating systems and finance. The relative cost of the package does not seem to have been the deciding factor.

The Thai government is committed to take at least 25% of the total equity when final figures are determined. It is estimated that this 25% will amount to around 10.5 billion baht (US$416 million). The shortfall is to be made up by foreign investors. Approximately 50% to 60% of the cost of the project will be for imports. They will be partly financed by 23.6 billion baht (US$934 million) worth of mixed credits, mainly from Canada, with a smaller credit from Japan. It was initially hoped that a final agreement could be reached in the summer of 1989, and that "Stage One, Phase One" of the metro would be in operation by 1994.

Pakistan

Pakistan signed the basic contracts for its first major BOT project, the Hab River project, on December 23, 1989, and is actively seeking others as part of its overall policy to encourage private investment in the power sector. Pakistani officials, moreover, have outlined in various published statements orderly guidelines for evaluating and negotiating BOT projects. The government of Pakistan recognizes that it may wish to deal not only with competitive bids, in response to a request for proposals

initiated by the government, but also with unsolicited proposals from the private sector. It has developed a methodology for dealing with both kinds of proposals.

Competitive bids are invited only after feasibility studies have been conducted by the Pakistan Water and Power Development Authority ("WAPDA") or Karachi Electric Supply Corporation, the site of the power plant is known, the type and size of the plant has been determined and all other parameters, including the cost of the equipment, have also been generally determined. The government will evaluate all bids submitted and settle upon a project sponsor based primarily upon the lowest proposed power tariff. Other factors will also be considered, however, such as the overall conformity of the bid to the specifications in the tender documents and overall capital costs, financing charges and costs of operation and maintenance. The impact of these other factors on such issues as foreign exchange requirements or possible escalation in the power tariff over the life of the project is to be taken into account. Once the sponsor is picked, the government will issue a letter of intent, and the sponsor then will have a certain period of time to carry out its own feasibility studies, to obtain the necessary financing, and to negotiate and finalize the various contractual documents leading to financial close and the start of construction.

In the case of unsolicited proposals, the private party must carry out its own feasibility study, select its own site and determine the type, size and fuel for the proposed plant. Initial permission to carry out a feasibility study must, nonetheless, be obtained from the government. The government will then review the proposal to determine the appropriate power tariff, based on the government's understanding of the costs of the proposed equipment in the international market, standard construction costs, fuel costs, financing costs, operations and maintenance costs, and a projected 18% return on equity at a level of plant availability between 60% and 65% of designed capacity. The government will insist on full disclosure of all of the cost data and thus on full transparency of the tariff. The government also has as a benchmark its own cost of power. It is noteworthy, however, that the government has recognized the need to provide a realistic return on equity at an availability level which is sufficiently low to provide considerable downside protection as well as significant upside potential for better performance. When all of these details have been negotiated with the Ministry of Water and Power, the proposal will be formally submitted to the government for approval. If approved, a letter of intent will be issued and the project will proceed to finalization.

The government of Pakistan has indicated that BOT projects in the energy sector normally should be financed 25% by equity and 75% by debt. Although both the equity and the debt portions

are expected to have a foreign and a local component, the government has not set any fixed ratio between the two. Local financing has proved to be something of a problem in Pakistan. Local banks are reluctant to extend loans for the purpose of such projects, local financial markets are not as well developed as they might be, and the government is still in the process of seeking satisfactory methods of tapping the resources that are available both locally and from Pakistanis living outside Pakistan.

The World Bank has played an important role in private sector energy development in Pakistan. With support from the World Bank and other donors, a Private Sector Energy Development Fund (the "PSEDF") has been set up under the control of Pakistan's National Development Finance Corporation to be used to finance up to 30% of private sector energy projects. The initial funding amounts to US$520 million, of which US$146 million has been provided by the Bank, and the remainder by the Japanese Export-Import Bank, the U.K. Overseas Development Agency, the Government of Italy and USAID. All loans to the PSEDF are guaranteed by the government of Pakistan. Loans made by the PSEDF to BOT projects may be subordinated to loans provided by commercial lenders. The commercial lenders, in that case, would be financing only about 45% of the total cost of the project and would be senior in right of payment to both the PSEDF, which would be financing up to 30% of the total, and the equity investors, financing about 25%.

Pakistan's first major BOT project involves a 1,300 MW oil fired power plant to be sited near the mouth of the Hab River, in Baluchistan province, about 40 kilometers from Karachi. The sponsoring consortium is led by Hawker Siddeley Power Engineering of Great Britain and Xenel Industries of Saudi Arabia. The total Hab River project is currently estimated to cost some US$1.1 billion to US$1.3 billion. (Press reports of the precise figures are conflicting.)

In addition to the Hab River project, Pakistan has issued letters of intent to the Fauji Foundation for a 300 MW oil fired, steam driven power plant, and to a Habibullah Mines (Pakistan)-Siemens (Germany) consortium for two coal-fired steam stations totaling 130 MW. It is also considering a number of proposals for smaller oil fired and coal fired plants.

Philippines

The Philippines has recently experienced rapid growth in energy demand, indicating an immediate need for the expansion of energy supply capabilities, particularly power generating capacity. To assist the Philippine government in addressing its energy problems, the World Bank carried out an energy sector study in 1988 and has proposed a US$350 million loan to help

finance the first phase of a new development strategy for the Philippines energy sector. One of the components of this strategy is the encouragement of private sector participation through joint ventures and BOT schemes. For instance, it is intended that proceeds of the World Bank loan could be used by the Philippines National Oil Company and the National Power Corporation (the "NPC") to meet cash calls on these agencies in joint ventures with the private sector, e.g., BOT schemes.

A number of BOT projects have been proposed in the Philippines. One of the first to be implemented involves the development of a 200 megawatt gas turbine power plant in Metro Manila. This plant, which was initially estimated to cost about US$42 million, is expected to be used primarily as a standby facility for "peak load" purposes. The project sponsor is Hopewell Holdings Limited of Hong Kong. An implementing agreement was entered into with the NPC in mid-November 1988. The Asian Development Bank and IFC were both initially slated to provide debt and equity for the project. Equity was also to be provided by Hopewell and Citicorp. Apparently IFC decided not to participate in this project in the end, and its precise status at the present time is not known, although it is reported to be going forward.

All of the electricity produced by the plant was to be sold under "take-or-pay" terms to the NPC. The NPC was to pay both a fixed monthly capacity fee for a contracted capacity of 200 megawatts, regardless of usage, together with an additional energy fee based on the actual amount of electricity generated. Total fee revenue would be used to pay operating expenses, taxes, debt service, and dividends. The NPC was to provide free fuel and free use of the project site for the entire contract period.

On the issue of risk sharing, the sponsors insisted that under the take-or-pay contract, part of the capacity and energy fees be paid in U.S. dollars into an offshore account in Hong Kong. The sponsors also insisted that the Philippine government provide a performance undertaking to back up the NPC's payment obligations under the agreement. Although the Philippine government was at first unwilling to provide anything more than a comfort letter assuring payment and foreign exchange convertibility, in the end the formal commitments sought by the sponsors were reportedly provided.

The Hopewell project apparently was the result of an unsolicited proposal and was not the subject of competitive bidding. In March 1989, however, the NPC issued a solicitation to pre-qualify potential bidders to undertake a 300 megawatt coal-fired power plant on BOT terms. According to the NPC, some 35 companies requested copies of the solicitation, and some 14 were eventually pre-qualified: five Japanese, four European, three American and one each from Australia and Hong Kong. The

official request for proposals was issued on November 5, 1989. The NPC wants to have the plant operational by 1993. It appears that the government does not plan to provide any guarantees to cover lenders for project risk due to sponsor failure or force majeure events. This may become a stumbling block in the Philippines, since experience in other countries suggests that foreign lenders and export credit agencies may not be willing to finance BOT projects in the absence of a security package which essentially insulates the senior lenders from project risk.

One question which has been raised by at least one potential bidder with respect to the Philippines' proposal relates to the specifications of the coal to be supplied by the NPC to the project. The proposal requires that the boiler and its auxiliary equipment be designed to handle both local and imported coals with specified typical analyses ranging from a best case to worst case scenario. Such vagueness forces the BOT sponsor to design a plant based on the worst case scenario, rather than being able to design for a specific grade of coal, the supply of which would be assured by the sponsors. This will considerably increase the cost of the plant. A question has also been raised as to what remedies the project company and its lenders will have if the fuel specifications are not met, or if delivery is interrupted.

The Philippine government has provided a set of standard foreign investment incentives and guarantees to potential sponsors. Sponsors will be registered with the Board of Investments and will be entitled to the privileges and incentives given by the government under Section 74, Republic Act No. 265 and the Omnibus Investment Code of 1987. These incentives include:

-- the right of foreign investors to remit earnings from and to repatriate the entire proceeds of the liquidation of foreign investments in the currency in which the investments were made and at the prevailing exchange rate at the time of remittance or repatriation;

-- the right of investors to remit, at the prevailing exchange rate at the time of remittance, such sums as are required for the payment of interest and principal on foreign loans and obligations;

-- a guarantee by the Philippine government that property of the BOT firm will not be expropriated by the government except for public use or in the interest of national welfare or defense and upon payment of just compensation;

-- a full exemption from income taxes levied by the Philippine government for four to six years from

commercial operations, with yearly extensions allowable under certain specified cases;

-- certain provisions for the additional deduction of labor expenses;

-- certain tax and duty exemptions on imported capital equipment;

-- simplifications of customs procedures;

-- exemptions from certain taxes on contractors; and

-- other similar incentives.

ANNEX 3

AN OVERVIEW OF BOT PROJECTS PROPOSED IN TURKEY [1]

Jean-Jacques Lecat [2]

I. The Turkish Government's Approach to the BOT Model

The government that took office following the 1983 elections, headed by Prime Minister Turgut OZAL, launched a privatization initiative which included the implementation or transfer of new and existing projects to the private sector through BOT schemes. The use of the BOT model, originally proposed for the construction and operation of a nuclear power plant, was considered in 1986 by the government for the implementation of more than twenty projects including:

- transport infrastructures (Ankara to Istanbul highway and other highway sections, as well as port and airport facilities);
- free trade zones to be built at Antalya and Izmir; and
- power plants including hydroelectrical projects and coal fired stations.

In addition to projects initiated by the government, several city councils, e.g. in Istanbul, Ankara, and Izmir, sought to promote their projects under the BOT model following proposals from private investors, sometimes without the necessary government support.

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1 This note was prepared at the request of the World Bank's Legal Department as a contribution to the report on "The Build, Operate and Transfer (BOT) Approach to Infrastructure Projects in Developing Countries" prepared for the World Bank by Mark Augenblick and Scott Custer of the law firm of Shaw, Pittman, Potts and Trowbridge (Washington D.C.), January 1990.

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The main terms and conditions of the BOT model have been established under the supervision of the Foreign Investment Directorate (FID) of the State Planning Organization (SPO) which is in charge of approving foreign investments in Turkey. The terms of the agreements are negotiated with the authority in charge of the relevant economic sector and have to be approved by the FID and the Undersecretary of Treasury and Foreign Trade of the Ministry of Finance with respect to financial and foreign exchange conditions.

In 1987, the Turkish Government set forth the principles governing the implementation of projects under the BOT model in a note distributed to potential investors, which read as follows[3]:

"An Approach to Self-financing of the Infrastructural Projects: Built-Own-Transfer (B.O.T.) Model

To bring in new and advanced technology and good management and to realize some of the infrastructure projects which are needed, but kept outside of budget outlays due to macro balances of the economy, the present Turkish Government which took office towards the end of 1983, have opened such projects to private sector within the framework of Built-Own-Transfer (B.O.T.) Model. Some of the hydraulic dams, power plants, airports, trade centers, free-trade zones, metros, port projects, railways, etc. are under this classification.

The relevant agreements to implement some of the hydraulic dam and power plant projects and a free-trade zone project via said model have been signed already between the Ministry concerned and

3 The text in square brackets and the footnotes were added by the editor of this paper.

consortium acquiring the project. And negotiations for the implementation of some other projects are continuing.

The principles of "Build-Own-Transfer" Model are summarized below:

1. *A Joint Venture Company (JVC) shall design, engineer, construct, finance, own, manage and maintain the project.*

2. *Debt/Equity ratio should not be less*[4] *than 80/20.*

3. *The Republic through an appropriate entity will be willing to invest up to 30% of the equity in JVC to be formed to acquire and operate the project.*

4. *All financing of the project (other than the equity) will be arranged by the sponsors but will be the obligations of JVC.*

5. *JVC is obliged to complete the project under a turnkey fixed price contract. However the liability of the contractors for failure to complete the project will be joint and several towards JVC.*

6. *Construction cost overruns other than force majeure and Republic default events shall be borne by JVC.*

7. *In the event that the project has not been completed on schedule or any interruption during the operation, JVC shall utilize the following secondary funds for debt service obligations.*

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4 One may wonder whether the intent was not to say "should not be higher than 80/20".

(a) *Standby financing obtained by JVC at least to cover 12 month debt service.*

(b) *Any liquidated damages available from the contractors and/or suppliers.*

(c) *Any available insurance proceeds.*

(d) *Reserve fund during the operation at least to cover 12 month debt service.*

(e) *Subordinated loans made by the Republic to cover 12 month debt service.*

8. *The Republic through an appropriate entity shall purchase products and/or services produced by JVC based upon annually agreed amount. Treasury will guarantee the Purchaser's payments under Sales Agreement.*

9. *The terms and conditions of purchase of products and/or services will be set in Sales Agreement.*

10. *The tariff will be calculated based upon the agreed annual amount of the products and/or services produced from the project.*

11. *The tariff will be composed of capital charge, operating charge and dividend and shall be payable in the particular currencies [in] which the project [was] financed:*

(a) *The capital charge is the basis on which JVC's lenders will be providing the senior debt;*

(b) *The operating charges will cover operation and administration costs including insurance costs and a maintenance reserve;*

(c) Dividend will be payments that include return on equity sufficient to provide an internal rate of return of the JVC's equity adequate to attract investors.

12. The equity shall be repatriated after all senior debt has been repaid[5].

13. When senior debt has been repaid and equity capital has been repatriated the plant may be transfered to the Republic or, if mutually agreed by the parties, JVC may operate the plant for another set period."

II. Overview of Proposed BOT Projects

Only a partial overview of the progress made in some of these projects may be given due to the incomplete information available:

1. Transport Infrastructure: The construction of toll roads on a BOT basis has not attracted the established construction companies and the Government has not received any serious offers for such projects.

The second bridge over the Bosporus was awarded to a consortium led by a Japanese contractor under a regular public investment contract rather than on a BOT basis. A consortium led by the UK contractor Trafalgar House proposed to the Istanbul City Council the construction of a third bridge under the BOT model; this unsolicited proposal was not accepted, as the Government was not convinced of the need to build a third bridge over the Bosporus, regardless of the financing scheme.

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5 One may wonder whether the intent was not to write: "The equity shall not be repatriated before all senior debt has been repaid".

The Istanbul City Council received three different proposals from three French contractors (Bouygues, Société Générale d'Entreprise SGE, and Dumez) for a tunnel under the Bosporus. However, the project did not receive the necessary government support, in particular, with respect to the guarantees which were sought from the Istanbul City Council. Furthermore, the mayor who had initiated the project was not reelected in 1988.

The Istanbul Airport extension project included the construction and management by a privately owned company of a new terminal and world trade center (30,000 hectares); the existing facilities would be contributed by DHMI (the public authority in charge of civil aviation). Airport taxes and fees would be paid by the airlines to the operating company in foreign currency. Even the Turkish Airline (THY), would pay a portion of these taxes in foreign currency. Several US companies and a French company bid for this project. Lockheed Corporation was ranked first. Other bidders have complained that only the cost of construction of the terminal was taken into account in the bid evaluation, without due consideration for: (i) criteria pertaining to the operation of the terminal after the completion of the construction phase; and (ii) the construction cost of the World Trade Center (WTC). The combination of the airport terminal and world trade center projects under one BOT contract is a major reason for the delays in concluding this deal. It appears to be a way for the Government to entice a consortion to build and operate the WTC, which by itself would probably not be a viable project: this could hold up the terminal construction unnecessarily.

The Turkish Government proposed the construction of a metro in Ankara using the BOT model although the city council was not so enthusiastic to have a privately managed metro. Considering the

high cost of infrastructure, the project was divided in two parts, as is common in many railway construction projects in Europe: (i) heavy infrastructure financed by the state and operated by a joint venture with private majority interest and (ii) equipment financed by the private shareholders. The feasibility study was financed on Canadian concessional funds provided by CIDA and was done by a Canadian firm. The Canadian firm Bombardier was the first ranked bidder.

2. Water Supply: In the Water Supply sector, foreign contractors proposed the building and operation of a water treatment plant, within the framework of a project for the rehabilitation and extension of the piped water supply system of the city of Izmir financed in part by a World Bank loan. The operating company would have included private foreign and Turkish partners and would have sold water in bulk to the city councils of the region. According to our information this project has not been implemented due to lack of support by the governmental authorities and the uncertainty of the legal framework, as it is not clear whether the city council has the right to contract out water supply services to a private company.

3. Electricity Supply: In the area of Electricity Supply, the construction and operation of various types of power stations have been under discussion for several years. Originally, the BOT model was proposed for the construction and operation of a 1,000 mw nuclear power plant of an estimated cost of $652 million at Akkuyu; a joint venture utility (the "JVU") consisting of 70% private interests and the government-owned Turkish electric authority (TEK) would finance, build, own and operate the plant for 15 years. During that period TEK would purchase the plant's generated electricity from the JVU at fixed prices. The Turkish Government and the main bidders selected for negotiations, Atomic Energy of

Canada Ltd. and Kraftwerk Union, never reached a final agreement and the project was not implemented. The main points of disagreement among the parties related to the distribution of risks: the Turkish Government was not willing to provide a security package satisfactory to the export credit agencies of West Germany and Canada. Without such guarantees, the banks involved in the financing could not provide the required export credits.

In May 1987, an agreement was signed between TEK and a consortium comprising Kumagai Gumi of Japan and Yukabel Insaat, a local company, for the building and operation of a 300 mw dam and hydroelectrical power station at Yedigoze on the river Seyhan, near Adama, for an estimated cost of $231.5 million. A proposal for a hydroelectric project to be built at Yamula in central Anatolia under the BOT model was, according to our information, never implemented.

4. Coal Fired Power Stations: Coal fired power station projects involved a large number of foreign firms invited to submit proposals under a competitive bidding procedure; some reached the stage of advanced negotiations with the Turkish authorities. The lengthy and intermittent discussions which have taken place during the last five years have led to some changes in the policy originally established by the Government and to the elaboration of complex arrangements which are summarized in the following section.

The history of these projects starts in 1984, with the pre-feasibility study carried out by Bechtel at the request of the Turkish Government for a 600 to 1,000 mw coal fired electric plant that was to be financed and built on the BOT model. In September 1985, on the basis of the positive results of this study, Bechtel submitted an offer for a 960 mw plant to be built at Tekirdag, on the sea of Marmara, at a cost of about $1 billion; to carry out this

project Bechtel formed a consortium including Combustion Engineering, a US manufacturer of steam generators, and the German company Kraftwerk Union (KWU).

During the negotiations with Bechtel, which started at the end of 1985, the basic conditions which were then used by the Turkish Government to establish the terms of reference for similar projects were negotiated. In the meantime, other consortia made proposals for coal fired plants at other sites. At the end of February 1987, the Ministry of Energy and Natural resources sent a letter to the five consortia that had made proposals defining the most important criteria for the evaluation and selection of the best offer as well as the security package granted by the government (see Attachment to this note). Proposals were submitted by the following consortia, each consortium bidding for a project at a different site: (i) Bechtel (USA) and KWU (West Germany) for a plant in Tekirdag; (ii) Seapac (Australia), Chiyoda (Japan) and Westinghouse (USA) for a plant in Yummurtalik, near Gazi; (iii) Asea Brown Bovery (Sweden/Switzerland) for a plant on the sea of Marmara; (iv) Electric Power Development Corporation (Japan) for a plant at Aliaga; and (v) Alsthom (France) and Ansaldo (Italy) for a plant near Izmir. The bidders were ranked in September 1987, and the Turkish authorities declared that three plants would be built in the following eighteen months.

The first ranked bidder was the Seapac-Chiyoda-Westinghouse consortium which benefitted from the support of the Queensland (Australia) Government with respect to equity funds and coal supply. Contractual documents were initialled by the parties in December 1987. The Government of Queensland however, soon withdrew its support, and Chiyoda and Westinghouse took over the leadership of the consortium. The Turkish Government spent the first half of 1988 negotiating with all of the sponsor groups in turn, but returned in

August 1988 to exclusive negotiations with the consortium now led by Chiyoda and Westinghouse. By June 1989, members of the Chiyoda consortium claimed they had reached final agreement with the government on all points. A month later however, the Gazi project had reportedly been put on hold by the Turkish Government. In late October, the Government announced that it had signed an agreement in principle with one of the other competing sponsor groups, the Japanese consortium led by Electric Power Development Corporation, for a $950 million coal fired power plant at Aliaga. This project now appears to be held up on environmental grounds.

Legislation is being submitted to the Turkish Parliament for the creation of an Energy Fund. This Fund would serve, amongst other purposes, as a vehicle for financing the various guarantees offered by the Government for BOT projects in the energy sector.

III. Main Conditions provided for the implementation of coal fired power projects

The main conditions and guarantees provided for the construction and operation of the coal fired power plants are described below, as they stem from the documents prepared by the Turkish authorities and some of the contractual provisions negotiated by the consortia. These provisions are contained in the following main agreements required for the implementation of a BOT project:

(i) A Protocol between the Turkish Government and the consortium establishing the key principles and undertakings between the parties;

(ii) An Implementation Agreement between the Consortium, the operating company to be formed (the Project Company),

and the Turkish Ministry of Energy and Natural Resources (MENR) which forms the basis for the construction and operation of the Project;

(iii) An Energy Purchase Agreement between TEK and the Project Company whereby TEK is irrevocably committed to purchasing available electric power on a take or pay basis;

(iv) A Construction Contract between the Project Company and the main contractors;

(v) A Subordinated Loan Agreement between the Project Company and the "Public Participation and Mass Housing Fund" (the Fund);

(vi) An Escrow Agreement between TEK, the Project Company, the Fund, the co-lenders to the Project and the escrow agent.

As a first step, once all the above agreements would have been negotiated and signed, the Turkish Government would issue a Decree approved by the Council of Ministers confirming its obligations under these agreements.

1. Energy Purchase Agreement: The Purchase Agreement irrevocably commits TEK to purchase from the Project Company any and all amounts of energy made available. In some proposals a minimum guaranteed annual energy purchase was set and defined as a proportion of the plant's production capacity. The Purchase Agreement is to be entered into by TEK and the Project Company while the Turkish Government undertakes to guarantee all TEK obligations to the Project Company and the lenders (in the event of assignment) and to

provide adequate funds to TEK enabling it to fulfill its obligations.

The price of energy must cover the operating costs and feedstock costs, the debt service, and a return on equity fixed between 15% and 20%. The energy price is expressed in a convertible currency or in a basket of convertible currencies (the European ECU has been used in some proposals). Either TEK undertakes to pay for the power purchased in convertible currency, or the government provides a guarantee to the Project Company for the conversion into hard currencies of payments in local currency it receives from TEK. The consortia have been requested to submit offers based on three different scenarios: (i) a constant energy tariff over the repayment period of the senior debt, (ii) a variable tariff over the said period, and (iii) a tariff based on a 26 year term (which implies that the implementation agreement would have a 26 year period instead of the 15 year period initially mentioned).

2. Reserve Fund: A "Reserve Fund" in convertible currency is to be set up prior to the plant's estimated commissioning date, initially using shareholders' equity. The amount of the Reserve Fund is to be sufficient to cover: (i) all debt service at the date of the first installment due under the export credit agreements; and (ii) by the end of 3 years following the commissioning, at least 12 months forward debt service (two six-monthly installments). The Reserve Fund is to be built up so as to reach this minimum amount during the 3 year period from the commissioning, primarily by allocation of profits prior to any distribution to shareholders.

3. Escrow Accounts: All cash (whether subscribed as equity or paid by TEK under the terms of the Energy Purchase Agreement) and other revenues payable to the Project Company are to be paid into interest bearing accounts (the "Escrow Accounts") in local currency

and foreign currency with an international bank acting as an escrow agent. The escrow account in foreign currency is to be used for the payment of imported equipment, operating costs in foreign currency, debt service, replenishment of the Reserve Fund if required, agreed return on equity, and repayment of Turkish subordinated loans if required.

4. Subordinated Loans: During negotiations of the first projects in 1986, the export credit agencies required some form of unconditional guarantee from the Government. The Turkish authorities agreed to make subordinated loans in foreign currency to the Project Company in order to cover revenue shortfalls under certain circumstances. Such subordinated loans are to be reimbursed by the Project Company in the event its default is established. These loans are to be provided by the Public Participation and Mass Housing Fund (the Fund).

The repayment of subordinated loans should be borne solely through: (i) an increase in the energy tariff if these loans are required by reason of force majeure or Government default; or (ii) reduced dividends to the Project Company's shareholders if these loans are required for any other reason. The export credit agencies agreed to consider such subordinated loans as equivalent to a sovereign guarantee. The question remains as to the conditions under which the subordinated loans are available and up to what amount.

(a) Government Default and Force Majeure

The Turkish authorities agreed that the subordinated loans should be made available at any time during the term of the project in the event of shortfalls of cash flow due to government default ("Fait du Prince") or force majeure.

Government defaults and force majeure are defined in the Implementation Agreement.

The definition of government default aims at safeguarding the Project Company (through the granting of subordinated loans) in the event of any action or inaction of governmental, legislative, judicial, regulatory agencies or other public authorities in Turkey which would interfere with the performance of the Project in a way inconsistent with its financial or technical feasibility and in a way which would conflict with the expressed or implied provisions of the Implementation Agreement or of any of the Project Documents.

The Government defaults may also include any failure by the Turkish Government or the Fund to make any payments or perform any obligations necessary for the performance of the project under any contractual documents. The promoters and export credit agencies expressed the concern that the funds be provided unconditionally, i.e. regardless of any discussion or dispute by the government of its default. This issue remained outstanding in most projects under discussion.

(b) Shortfalls caused by other events

In any event other than Government default or force majeure, a subordinated loan is available during the construction period and for a three year period from the provisional receipt of the plant to cover shortfalls in the Project Company's cash flow.

(c) Available Amount

While in their initial proposal the Turkish authorities had limited the amount of the subordinated loans to an amount equal to one year of debt service, they now seem to agree to extend the subordinated loan availability to any shortfalls of cash flow without limitation to the debt service (including payment of operating costs or dividends, and to extend the amount of guaranteed debt service to the amount of the reserve fund as defined above. However, the later position of the export credit agencies was that the subordinated loans should guarantee the whole amount of the disbursed export credits. The provisions of the documents negotiated with the Turkish Government as of this writing are not clear in this respect.

5. Foreign Exchange Guarantee: The Turkish Government is granting a guarantee of convertibility of local currency and availability of convertible currency in respect of: (i) the payments due by TEK in convertible currency under the Energy Purchase Agreement, and (ii) the remittances to be made by the Project Company to its shareholders or to any other foreign party.

6. Taxes and Duties: The coal fired power plants are to be built in designated free zones. The Project Company will then benefit from all tax advantages available under the free zone regime applicable in Turkey including exemption from import duties on equipment and raw materials (except for 0.5% on CIF value), and exemption from corporation tax. In Turkey, there is currently no tax on dividends or on interest paid abroad.

7. Applicable Law and Resolution of Disputes: The Turkish legal system derives from Swiss, French and German laws. In particular, contractual obligations are governed by the Code of Obligations

which is inspired from the relevant Swiss Code. Therefore, reference to the Turkish law, which seems unavoidable in the agreements between the Project Company and the Turkish public authorities, should not constitute a major obstacle, provided that protection against adverse changes in laws or regulations is obtained (e.g. through the government default provisions) and that a procedure for the settlement of disputes before a neutral forum is agreed upon.

In this regard, particular attention must be given to the rules governing the execution of foreign arbitral awards in Turkey. It must first be noted that the ICSID Convention, which provides adequate procedures for the settlement of disputes between foreign investors and the host state and/or the execution of the awards, was signed by Turkey on June 24, 1987 and ratified on March 3, 1989. Guarantees deriving from Turkish accession to the ICSID Convention are thus very recent. Turkey is not a signatory of the New York convention on enforcement and execution of foreign arbitral awards. However, under the Turkish law (Law No 2675 of May 20, 1982) a foreign award may be executed by a Turkish court under one of the following conditions:

(i) there is a reciprocity agreement between the Republic of Turkey and the state in which the award is rendered. Turkey has signed such agreements with Austria, Italy, and Romania. However, arbitral awards rendered in those countries are not executed by the Turkish courts if they were rendered under international rules of arbitration or under rules from a third country. Thus, certain decisions rendered in Vienna in accordance with the regulations of the International Arbitration Institution were not recognized in Turkey;

(ii) the law of the state where the award is rendered allows the execution of decisions awarded in Turkey (principle of reciprocity); or

(iii) in the absence of a provision such as mentioned under (ii) above, there are precedents of such execution. Based on these grounds, reciprocal execution of judgments has been obtained for decisions rendered in certain "cantons" of Switzerland.

IV. Concluding Remarks

As of this writing, none of the major BOT projects has been finalized , although a "final" stage of negotiations between certain sponsors and the Ministry of Energy has been reached on some power plant projects. The Ministry of Finance has the following explanation for the difficulty which has been encountered in concluding BOT deals.

In the offers submitted by some of the consortia, the Ministry of Finance found the cost of the plant to be significantly more expensive than if the plant were purchased on a turn-key basis by TEK. This resulted from the inclusion by the equipment suppliers, who are also part of the BOT consortia, of a profit margin on the equipment in addition to provisions in respect of operating risks. Since, as a result, the cost of a power plant is higher than it would be normally, the sponsor must base its offer on unrealistically high production forecasts in order to obtain a low level of energy tariff. Such high capacity utilization, in turn, would reduce the lifetime of the equipment and require its total replacement at the end of the concession period.

Furthermore, there is speculation that the Japanese bidders may bid at a loss in order to gain a reputation in the large power plant market. If this were the case, the energy tariff would not cover the true depreciation value and may not allow the Project Company to recover its costs, including costs of proper maintenance and renewal works for the plant.

The security package, on which the various export credit agencies agreed after mutual consultations, results in the transfer of all the risks to the Turkish Government including, through the subordinated loans, an unconditional guarantee for the repayment of all the funds disbursed under the export credit (see Section III.4 above), which voids to a large extent the expected advantages of the BOT formula.

As a provisional conclusion, it appears that BOT projects in areas involving heavy investment in infrastructure may not be successfully implemented in Turkey as long as the sponsors and lenders are not prepared to take risks beyond those accepted in the proposals discussed to-date. Also, the Government should be ready to let sponsors keep higher profits for performance exceeding the agreed targets. The multilateral financial institutions of the World Bank Group may help to increase the confidence of sponsors and lenders in two ways. On the one hand, by providing support to the Government in improving the country's overall macroeconomic situation (in particular the external indebtedness) and business environment. On the other hand, by supporting specific BOT deals through hard currency loans or guarantees.

ANNEX 3

Attachment

Letter sent by the Ministry of Energy to the Consortia bidding for the Construction Operation of Coal fired Power Stations

Dear Mr. ..... ,

I am pleased to inform you that the Government of Turkey, following several meetings and discussions with various export-import banks that are interested in lending credits to the coastal imported coal-fired power stations to be realized in Turkey via B.O.T. scheme, has decided to back up the projects within the framework of limited recourse financing. This security arrangement and our new energy purchase policy is given in the Annex-1 to this letter.

Presently your written comments supplied to us concerning our draft agreements sent to you on October 16, 1986, are being evaluated and reviewed. The revised and final proposal based on the criteria mentioned in the attachment to this letter together with any further comments on our draft agreements should be submitted not later than April 10, 1987.

The following criteria are the most important issues for the evaluation and selection of the best offer :

1. How well the proposal fits to B.O.T. concept and how close to non-recourse financing structure.
2. Are the major preliminary commitment letters from the export-import banks submitted.
3. Given the technical specifications of the project, (Annex-2) does the proposal offer the best price of electricity.

Within the framework of these principles the offers will be ranked and priority for negotiation will be granted to the consortium which has the best offer. It is expected that, based on the results of the negotiation held with the first consortium, the negotiations will be carried out with all the other consortia concerned depending on the electricity demand and credit availability.

Sincerely Yours,

Undersecretary

Annex-1 : Notes on the Security Package and the Energy Purchase Policy.
Annex-2 : Design Principles - Scope of Work

cc: State Planning Organization
Undersecretariate of Treasury and Foreign Trade
TEK - Turkish Electricity Authority

ANNEX - 1
to the Attachment

I. SECURITY ARRANGEMENTS

A. Subordinated Loan Obligations of the Turkish Government

The Government of Turkey through the Public Participation Fund shall provide Subordinated Loans to the Project Company in the event of shortfalls in the debt service escrow account for the full construction period plus an additional period of the greater of the first three years of operation and/or build up of the reserve fund to a level equal to one year's forward debt service. Thereafter, except in the event of shortfalls in the debt service escrow account due to force majeure or government default and due to causes which are in dispute, subordinated loan obligations would cease.

B. Repayment of Subordinated Loans

The repayment of subordinated loans along with any interest and costs associated with utilization thereof shall be :

i. borne solely in the energy tariff, if such financing is required by reason of force majeure or government default,

ii. borne solely through dividends of investors, if such financing is required for any other reason.

C. The Project Agreements

The Turkish Government, through the appropriate agencies shall participate in the following agreements:

1. Implementation Agreement

2. Energy Sales Agreement
   The Undersecretariate of Treasury and Foreign Trade will guarantee the TEK's payment obligations under this agreement.

3. Escrow and Subordinated Loan Agreements
   The parties to this agreement will be the Ministry of Energy and Natural Resources, the Project Company, the Public Participation Fund Administration (PPFA), Senior Lenders, and the Escrow Agent. The subordinated loan obligations of the PPFA under this agreement will be guaranteed by the Undersecretariate of Treasury and Foreign Trade.

D. Escrow Accounts

1. TEK Reserve Account
   This account will be funded from:
   i. capital charge component of the tariff before commercial operation date,
   ii. capital charge component of the tariff corresponding to the energy purchased by TEK above the guaranteed annual net generation level after the commercial operation date.

2. Dividend Escrow Account
   The dividends of the investors will be accumulated in this account and the liquidation of it is up to shareholders and senior lenders.

3. Debt Service Reserve Account
   This account will be funded equally from (1) and (2) above until the needed amount is accumulated.

4. Installment or Debt Service Escrow Account

II. PURCHASE OF ENERGY

T.E.K. shall purchase from the Project Company any and all amounts of energy made available from the project. The energy tariff will be calculated based upon an agreed guaranteed annual net generation of energy produced from the project. T.E.K. shall pay for the guaranteed annual net generation of energy, provided that this amount was made available by the Project Company. The tariff for the energy purchased by T.E.K. above the guaranteed annual net generation level shall be based on the incremental costs of producing the excess energy plus return on equity of the investors.

III. THE ENERGY TARIFF

The consortia are requested to offer a constant energy tariff over the repayment period of the senior debt. However, they have the option to offer a variable tariff over the said period. The consortia have also the option to calculate the electricity price on a 26-year basis. The tariff shall be based on February 1987 prices and should be quoted in original currency or currencies. The detailed cash flow analysis for the period in concern shall also be submitted together with relevant sensitivity analysis.

IV. COMMITMENT LETTERS

The major preliminary commitment letters from the export-import banks and the equity commitment letters of the sponsors should be enclosed to the proposal.

V. OTHER ISSUES

The following criteria should be taken into consideration in the preperation of the revised proposal :

1. The construction cost should be in February 1987 prices in conformity with the Design Principles - Scope of Work given in Annex-2 and the proposed escalation factors and formula should be given.

2. The details of the breakdown of the total investment cost and operation and maintenance costs including the number of employees and personnel should be stated.

3. If the port facility is to be constructed by a seperate company, the breakdown of the total investment cost of the port should be given and the handling fee per ton of coal based on this cost should be stated.

4. Every and each assumption taken into consideration for the financial analysis should be clearly explained.

5. Any further technical specifications should be enclosed.

ANNEX 4

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