

Build-Operate-Transfer: The Future of Public Construction?

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EXECUTIVE SUMMARY

- Build-operate-transfer (BOT) calls for a government to contractually grant to a private sector entity a concession requiring the entity to obtain financing for, design, and build a public facility or infrastructure (*build*); operate it for a fixed period of time, during which the private entity can recover its costs of construction, plus profit, by charging fees or tolls for its use or receiving payments from the government (*operate*); and then, at the end of the concession period, transfer ownership and operation of the facility back to the government (*transfer*).
- This article describes the BOT concept, discusses where and how it has been used in the United States, and analyzes its advantages and disadvantages.

With federal, state, local and foreign governments' budgets increasingly strained by hefty deficits, the prospect that sufficient public funding can be found for the timely construction of much-needed public facilities and infrastructure seems ever more dim. There is, however, a strategy for disconnecting public construction from public funding that is gaining attention around the world. Known widely as *build-operate-transfer*, or "BOT," contractors should be aware that this contracting method could profoundly affect the future of public construction.

WHAT IS BOT?

BOT is only one of a number of related, acronymic public contracting schemes, but they are all based on common principles seen perhaps most clearly in the BOT model. In its most basic form, BOT calls for a government to contractually grant to a private sector entity a concession requiring the entity to obtain financing for, design, and build a public facility or infrastructure (*build*); operate it for a fixed period of time, during which the private entity can recover its costs of construction, plus profit, by charging fees or

tolls for its use or receiving payments from the government (*operate*); and then, at the end of the concession period, transfer ownership and operation of the facility back to the government (*transfer*). In this way, the government shifts responsibility for financing public construction to the private sector, and the private sector gains the opportunity to profit according to how well it can construct and manage a public facility.¹

BOT schemes generally involve five major players: (1) the "principal," which is the "local or federal government body that recognizes the need for a public facility but is unable to financially support the project;" (2) the "concessionaire," which "is usually a consortium and takes the responsibility of developing (designing, financing and constructing), maintaining and operating the facility, on behalf of the principal," and which "realizes profits on the initial investment through the usage of the facility" during the operation period; (3) the investors, including shareholders (or sponsors) of and lenders to the concessionaire; (4) the contractor, which is generally part of the concessionaire; and (5) the operator, who "manages the operational stage of the facility," and "is usually part of the concessionaire's consortium, because of the critical role in the revenue

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stream [and] the importance of operating knowledge for programming, financing, design and construction.”²

BOT contracting also generally requires the execution of a number of different contracts. In addition to entering into the primary concession contract with the principal, the concessionaire must coalesce its consortium by entering into financial agreements with shareholders and lenders which detail how revenues from the operation phase will be distributed and what return on investment the investors are guaranteed; a construction contract with the contractor, which is “usually a fixed price contract or a design-build contract” that, “because of the concessionaire’s responsibilities towards the principal, the lenders, and the final users of the facility,” generally imposes “high fines . . . for late delivery;” and an operation contract with the operator which outlines how the facility is to be used and the “rates for usage of the facility” that may be charged by the operator.³ But the concession contract between the principal and concessionaire is the most important and often the most complex contract of the BOT process. That contract must address numerous, significant issues concerning any or all of the three BOT phases. Any party seeking to enter such a contract, whether public agency or private contractor, should have expert legal assistance in the drafting and negotiation of its terms.

Like any other contract, the BOT scheme involves negotiation by the various parties. Negotiation is based on knowledge. In order to gain the most from the BOT structure, [parties] must know and understand not only the advantages of using the scheme but must also be able to identify the potential problems and provide solutions. To realise [*sic*] the most from the BOT scheme, [parties] should . . . [a]chieve [the] right contractual balance by . . . carrying out negotiations with skill, care and professionalism.⁴

The multitude of “potential problems” that will be encountered in any concession contract include, but are certainly not limited to:

- how the various financing, construction and operation risks are to be allocated between the parties;
- what guarantees are in place to lessen or eliminate such risks;
- from what sources of revenue the concessionaire may recoup its costs and profit;
- what means of oversight and regulation the principal will have over the project;
- how the contract can be amended or changed as situations arise during the course and various phases of the concession period;
- what obligations or benchmarks of performance and maintenance must be met during the operation period;
- how delays to the project will be reimbursed or penalized;
- whether and how the concession may be extended or terminated;
- what remedies are available in the event of a party’s default on its obligations under the contract; and
- what dispute resolution procedures will govern the parties and the project.⁵

To effectively identify and solve such problems, parties are well-advised to obtain experienced counsel that can provide the “skill, care and professionalism” they will need in crafting an advantageous, and hopefully profitable, role for themselves in a BOT project.

As mentioned above, there are several other types of contracting schemes similar to BOT. *Build-transfer-operate* (“BTO”) differs from BOT only in that “the transfer to the public owner takes place at the time that construction is completed, rather than at the end of the franchise period,” and the concessionaire then “operates the facility on behalf of the owner.”⁶ In a *build-own-operate* (“BOO”) scheme, however, the concessionaire “retains ownership of the facility, makes returns on its investment by operating it for the rest of its useful life and may sell the facility at any point in time.”⁷ In contrast to BOT and

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BTO arrangements, “[l]egal title to the facility remains in the private sector, and there is no obligation for the public sector to purchase the facility or take title.”⁸ Indeed, “[a] BOO transaction may qualify for tax-exempt status as a service contract if all Internal Revenue Code requirements are satisfied.”⁹ Other variations on the BOT theme include *buy-build-operate*, where the government sells an existing facility or infrastructure “to the private sector entity, which then makes the improvements necessary to operate the facility in a profitable manner;” *design-build-operate*, in which “a single contract is awarded for the design, construction, and operation of a capital improvement;” and *lease-develop-operate* or *build-develop-operate*, where “the private party leases or buys an existing facility from a public agency; invests its own capital to renovate, modernize, and/or expand the facility; and then operates it under a contract with the public agency,” a scheme used by a number of municipalities to develop their transit facilities.¹⁰

BOT contracting may be a relatively new concept, but it has its roots in public undertakings of the past. For instance, a version of “the BOT approach was used as early as 1834 with the development of the Suez Canal. This revenue-producing canal, financed by European capital with Egyptian financial support, had a concession to design, construct, and operate assigned to the Egyptian ruler Pasha Muhammad Ali.”¹¹ The modern form of BOT construction was established in the mid-1980s by Turkey,

when it faced a shortfall in the funds necessary for new, desperately needed energy sector infrastructure. The innovation allowed private Turkish companies, in concert with foreign entities if necessary, to take on the financial burden of funding and building such infrastructure, in exchange for the opportunity to operate and recoup their construction costs from the new facilities over a certain period of time before transferring operation of the facilities back to the government.¹²

The Turkish government has been extremely proactive over the last two decades in constructing and expanding

the necessary legislative and regulatory framework to allow BOT contracting to be more widely and easily utilized in that country. However, the Turks have also learned that utilization of the BOT technique does not necessarily produce results: “By the end of 1997, Turkey had only gained 340 MW of power generation capacity, an increase of only about 1.5%, which lagged far behind the growth in consumer demand.”¹³

BOT IN THE USA

One would assume that the hallmarks of BOT-style contracting—privatization (if only temporarily) of public infrastructure and reliance on the private sector to build facilities more cheaply and efficiently—would make it a perfect fit for public construction in the United States. However, after the success of public-private partnerships in the 19th and early 20th century that built, among other things, America’s prolific network of railroads, use of the technique in this country declined. But it may be coming back into style, thanks to the same sort of economic pressures that inspired Turkey to turn to BOT contracting twenty years ago. Issues concerning the future of American infrastructure, including

how government must structure projects if private financing is to be a realistic alternative . . . are of particular importance at the moment because the federal government is shifting responsibility for infrastructure development to state and local governments – governments which are burdened already with the cost of maintaining facilities that have been built in the last fifty years with deep-pocket federal programs. * * * [A]fter WWII, when we could just go out and buy ourselves an interstate highway system off the shelf, these other approaches fell out of use. The Waste Water Treatment Program, for instance, was 90% government-funded – a town only had to come up with a dime to get 90 cents from the government to build a waste water treatment plant. * * * The program worked sufficiently well as long as the federal government had the money to sustain it, but now that Congress has stopped putting all the money on the table, some alternatives are needed.¹⁴

As a result, more and more public agencies may be coming to take as their credo the words of former New York governor Mario Cuomo: "It is not the government's obligation to provide services but to see that they're provided."¹⁵

One area of public contracting in the United States that already sees extensive use of BOT-style contracts is the transportation sector, especially in the construction and operation of toll roads. In that instance, "a public-private partnership is formed to contract with the private party to build and operate a toll road. The revenue source for the toll road is typically a blend of state and federal sources and future toll collections. Contractors and financial institutions are drawn to these projects because they provide construction business, and they generate large fees to the financial institutions for evaluating and arranging the financing of the projects.¹⁶ In addition, public-private ventures have often been used to build and operate bridges, parking lots and transit facilities.¹⁷

A review of court cases from around the country shows that BOT-style contracts are also used in the construction and operation of solid waste, landfill, and recycling facilities. One such case, decided by the U.S. Supreme Court, is *C&A Carbone, Inc. v. Town of Clarkstown*.¹⁸ *Carbone* is an important case in the analysis of the pros and cons of BOT contracting (discussed further below) because it highlights a common but controversial aspect of that form of public-private partnership: revenue guarantees. Frequently, governments, in order to attract private sector participants (and their investors) to engage in a BOT project, must provide certain guarantees that the concessionaire will indeed recover all of its construction costs, plus a healthy profit, during the concession period. Whether that translates into public agencies simply supplementing or thoroughly subsidizing the revenue streams of their concessionaires, this practice has drawn much fire from critics who contend that such a financial commitment to a BOT project by the public entity

undermines the very purpose for outsourcing the project to the private sector in the first place: shifting the burden of financing the project away from the already financially-overburdened government.

The New York municipality in *Carbone* provided certain financial guarantees to the concessionaire to underwrite any shortfall in revenues that might arise from sub-optimal use of the solid waste transfer station by the public. Notably, however, the city also attempted to guarantee sufficient revenues by ensuring that maximum use was indeed made of the transfer station:

A local private contractor agreed to construct the facility and operate it for five years, after which the town would buy it for \$1. During those five years, the town guaranteed a minimum waste flow of 120,000 tons per year, for which the contractor could charge the hauler a so-called tipping fee of \$81 per ton. If the station received less than 120,000 tons in a year, the town promised to make up the tipping fee deficit. The object of this arrangement was to amortize the cost of the transfer station: The town would finance its new facility with the income generated by the tipping fees.

The problem, of course, was how to meet the yearly guarantee. This difficulty was compounded by the fact that the tipping fee of \$81 per ton exceeded the disposal cost of unsorted solid waste on the private market. The solution the town adopted was the flow control ordinance here in question The ordinance requires all nonhazardous solid waste within the town to be deposited at the Route 303 transfer station. Non-compliance is punishable by as much as a \$1,000 fine and up to 15 days in jail.¹⁹

Claiming that the ordinance was unconstitutional, a local solid waste processing company brought suit against the town. The Supreme Court found that the plaintiff "receives bulk solid waste, sorts and bales it, and then ships it to other processing facilities—much as occurs at the town's new transfer station. While the flow control ordinance permits recyclers like [plaintiff] to continue receiving solid waste, it requires them to bring the non-recyclable residue from that waste to the

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Route 303 station. It thus forbids [plaintiff] to ship the nonrecyclable waste itself, and it requires [plaintiff] to pay a tipping fee on trash that [plaintiff] has already sorted.”²⁰ As a result, despite the conclusion of New York courts that the ordinance was valid, the Supreme Court ruled that the ordinance violated the Commerce Clause of the U.S. Constitution.

California also attempted to create a monopoly to help a BOT-style project succeed, but was forced to buy back its concession when litigation over the constitutionality of the monopoly threatened to indefinitely delay financing and construction. In the late 1980s, the state legislature concluded that “[p]ublic sources of revenues to provide an efficient transportation system have not kept pace with California’s growing transportation needs, and alternative funding sources should be developed to augment or supplement available public sources of revenue.”²¹ One of the alternatives California turned to was “privately funded Build-Operate-Transfer (BOT) projects whereby private entities obtain exclusive development agreements to build, with private funds, all or a portion of public transportation projects for the citizens of California.”²² The legislature was convinced that such a public-private joint venture would:

- (1) Take advantage of private sector efficiencies in designing and building transportation projects.
- (2) Allow for the rapid formation of capital necessary for funding transportation projects.
- (3) More quickly bring reductions in congestion in existing transportation corridors.
- (4) Require continued compliance with environmental requirements and applicable state and federal laws that all publicly financed projects must address.
- (5) Offer the traveling public alternate route selections in project areas.²³

Accordingly, in 1989, the state passed legislation authorizing its transportation department to “solicit proposals and enter into agreements with private entities, or consortia thereof, for the construction by, and lease to, private entities of four public transportation demonstration projects,” i.e. toll roads.²⁴ The statute provided for “the lease of those facilities to the private entity for up to 35 years,” followed by “complete reversion . . . to the state at the expiration of the lease at no charge to the state.”²⁵ Moreover, the law authorized the concessionaire to impose tolls for use of the roads, and directed that “over the term of the lease the toll revenues be applied to payment of the private entity’s capital outlay costs for the project, the costs associated with operations, toll collection, administration of the facility, reimbursement to the state for the costs of maintenance and police services, and a reasonable return on investment to the private entity.”²⁶

In the early 1990s, the state transportation department went a step beyond the requirements of the statute and began granting concessionaires exclusive development rights that barred the state from authorizing any competing toll roads within a certain radius of the concessionaires’ projects. Such “non-compete” arrangements survived a major court challenge in *Professional Engineers in California Government v. DOT*,²⁷ when the California Court of Appeal held that they did not violate the state constitution and that such deals were not an abrogation of the state’s police power because they did not expressly bargain that power away. Notably, the court also concluded that the legislature could always use its eminent domain power to condemn the concession if the need for a competing facility within the non-compete zone arose. Just last year, the legislature proved the court right. Again faced with litigation over the non-compete zone of a BOT-constructed toll road, the legislature found:

- (b) The Department of Transportation (hereafter the department) is a party to a franchise agreement with the California Private

Transportation Company, L.P. (CPTC), as authorized by Section 143 of the Streets and Highways Code, providing for privately financed transportation facilities within State Highway Route 91 (hereafter Route 91), with transportation facility development rights extending from Interstate 15 in Riverside County to the Los Angeles County and Orange County boundary. * * * The franchise agreement extends to the year 2030 and includes provisions prohibiting improvements to Route 91 in order to protect the investment in the privately financed facilities (hereafter noncompete provisions).

(c) The County of Riverside is currently challenging the legality of the noncompete provisions in a legal proceeding against the department and the CPTC.

(d) Current congestion on Route 91 and projections for future vehicle traffic and transportation demand through this corridor make it imperative that Route 91 improvements be planned and constructed as soon as possible.

(e) The Orange County Transportation Authority (OCTA) has determined that acquisition of the CPTC interest in the franchise agreement is desirable and is the most appropriate means to eliminate the noncompete provisions of the franchise agreement. By replacing private control of the franchise agreement and bringing the transportation facilities under public ownership, OCTA will restore the authority to public agencies . . . to make much needed improvements in the heavily congested Route 91 corridor and for OCTA to manage the transportation facilities to maximize throughput of vehicles and passengers rather than profits.

(f) The noncompete provisions shall be eliminated through the sale of CPTC's interest in the franchise agreement to the OCTA. This will facilitate the end of the litigation and enable planning and construction of critically needed transportation improvements to Route 91 through the Counties of Orange and Riverside.²⁸

Accordingly, the legislature amended Cal. Sts. and Hy. Code § 143 to, among other things, reduce the number of BOT-style toll road projects from 4 to 2, and bar the state transportation department from entering into any new projects as of January 1, 2003.²⁹

Four other states have also incorporated BOT-style contracting into their laws. An Illinois statute provides for such contracting "with respect to the construction, operation, closure, and post-closure maintenance" of regional low-level radioactive waste disposal facilities.³⁰ Interestingly, as hazardous and security-sensitive as such a facility is, the statute grants the state agency surprisingly broad discretion to enter into agreements containing

(i) provisions leasing, or providing for the lease of, the site to the operator and authorizing the operator to construct, own and operate the facility and to transfer the facility to the Department following closure and any additional years of post-closure maintenance that the Department shall determine;

(ii) provisions granting exclusive rights to the operator with respect to the disposal of low-level radioactive waste in this State during the term of the operating agreement;

(iii) provisions authorizing the operator to impose fees upon all persons using the facility as provided in this Act and providing for the Department to audit the charges of the operator under the operating agreement; and

(iv) provisions relating to the obligations of the operator and the Department in the event of any closure of the facility or any termination of the operating agreement.³¹

Wisconsin, like California, has authorized the use of build-operate-transfer and build-operate-lease (BOL) contracts for transportation projects, such as toll roads.³² Preconditions for their use include a determination by the state that "the agreement advances the public interest," and that "the private entity has prior experience in design, construction, site development and environmental impact analysis" and, in the case of BOL projects that do not revert to the state, "the capability of maintaining and operating the facility upon completion of the project."³³ In addition, all BOT and BOL agreements must include:

(c) A provision specifying that the project shall be constructed in accordance with requirements and specifications approved by the department of administration

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(d) A provision permitting inspection by agents of the department of transportation until title transfers

(e) If applicable, a provision specifying that any operation and maintenance under the agreement by the private entity shall be conducted in accordance with requirements and specifications approved by the department.

(f) A provision establishing a mechanism for the resolution of disputes.³⁴

In contrast to Illinois' and Wisconsin's solitary statutes, Minnesota and North Dakota have each developed similar, comprehensive statutory schemes authorizing and regulating BOT contracting in those states. Both Minnesota³⁵ and North Dakota³⁶ expressly define the BOT, as well as BTO, construction format, and both outline the following rights and responsibilities of the contracting parties:

- Private sector operators are allowed to mortgage, grant security interests in, and pledge their interests in (a) the public facilities and their components; (b) development, lease, management, concessions, and other related agreements; and (c) income, profits, and proceeds of the facility.
- The private operator may be allowed by the concession contract to assemble funds from any available source, including federal, state, and local grants, bond revenues, contributions, and pledges, and to incorporate existing public infrastructure into the facility.
- The concession contract may authorize the private operator to charge variable fees or tolls based on time of day, characteristics of the particular facility's service, or other factors approved by the public authority.
- The public authority is allowed or obligated to provide certain services to the project. (In Minnesota, the road authority must provide maintenance, snow removal, and police services to toll facilities. In North Dakota, the public authority may provide preliminary planning, planning, environmental certification, and preliminary design

services for infrastructure projects, for which the authority is entitled to be reimbursed.)

- The government is entitled to perform certain oversight of the project. (In Minnesota, the location and design of bridges must be reviewed and approved by the road commissioner and toll facilities are subject to regular inspections by the road authority and the commissioner. In North Dakota, leases of public facilities must be reviewed and may be revised every five years, and BOT-style facilities are subject to review and approval before being incorporated into existing infrastructure and subject to regular safety inspections.)
- Facilities built by the private sector must still meet the same environmental, navigational, design, construction and safety standards as those applied to facilities constructed or operated by the public authority.
- Revenues from the facilities during the operation period must be applied, in no particular order of priority, to repayment of indebtedness incurred for the facility, payments due the public authority for the concession, costs associated with the operation, administration, and maintenance of the facility, and reasonable reserves for future capital outlays. Remaining revenues after such payments are made belong to the private operator.

There are, however, important differences in the two states' laws. For example, while North Dakota requires only that "the anticipated fees, rental income, and revenues from the operation of the facility . . . be sufficient to pay the maintenance and operation costs for the facility, and principal of and interest on any evidence of indebtedness to finance the facility," Minnesota goes further toward ensuring that concessionaires earn a profit for themselves and their investors by mandating that the concession contract "establish a reasonable rate of return on investment

and capital during the term of the agreement.”³⁷ However, Minnesota also imposes on private operators of facilities that are to be transferred back to the public authority at the end of the concession period the obligation to “meet at least the maintenance standards of the [public] authority for facilities of the same functional classification during the term of the agreement.”³⁸

BENEFITS OF BOT

Some of the perceived benefits of BOT contracting have already been noted. First and foremost, under BOT, the significant costs and risks of financing, constructing and operating public facilities and infrastructure fall to a private sector entity better positioned to bear them than financially-strapped public agencies. In one proponent’s view, “[t]he greatest advantage of BOT for the government is the subcontracting of the majority of the risks to the private sector, with the latter willing to finance and assume risks in the development of a public facility. At the end of the concession period, the government will inherit a well-operated project without investing public funds and with little risks. A consequence of not investing its own money is that the project can take place even if the government’s budget is limited.”³⁹ Moreover, not having to earmark substantial funds for infrastructure-building allows states to “releas[e] public resources for other purposes, such as spending on welfare or education.”⁴⁰ Even with BOT, the public body continues to bear significant responsibilities, such as “the provision of certain assets (such as land), subsidies (where the project is not economically self-standing), . . . and perhaps—where users are not being charged directly by the private sector for the service in question—a revenue stream,” but these are generally well within its capability to provide.⁴¹ With the BOT technique, then, it is believed that each party “is left to shoulder the risks and responsibilities it is best suited to manage.”⁴²

In addition, utilizing BOT may help accelerate the development of public infrastructure projects that would otherwise have to wait and compete for scarce public resources. One benefit of accelerating such projects is that doing so “will capture project costs in current dollars, rather than postponing portions of construction into the future when the project costs will be higher.”⁴³ Moreover, accelerating public projects should, in turn, accelerate the economic growth that generally accompanies the development of infrastructure.⁴⁴

One of the most strongly perceived benefits of the BOT technique is the belief among its supporters that private sector participants bring to such projects a know-how, innovativeness, and efficiency inherently superior to that of the public sector, which can reduce project construction costs and time and increase the effectiveness and efficiency of public facilities and infrastructure. The private sector’s involvement, it is believed, brings with it “a commercial management approach” to building public facilities and infrastructure, and thus “represent[s] an effective means of tackling problems of inefficiency and sub-optimal performance which can sometimes afflict state-owned enterprises, including unmet demand and unreliable service.”⁴⁵ Moreover, by centralizing design, development, construction, and operation in one entity, especially a private entity, “the facility should be more effective and efficient.”⁴⁶ This is one of the reasons Massachusetts chose to use BOT-style contracting “to improve an interstate highway segment (Route 3 North) from Boston to New Hampshire. * * * [T]hey hope to minimize project delivery time and . . . reduce project costs by introducing efficiencies and reducing conflicts during construction.”⁴⁷

Furthermore, BOT projects may benefit from the participation of other private sector members of the concessionaire’s consortium. In one view, the involvement of private investors and consultants ensures “more intense scrutiny of costs and benefits, relevance and payback.”⁴⁸ As

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a result, “[t]he involvement of leading technical experts and experienced financiers . . . assists the true feasibility of a project to be assessed. Its costs and risks will be meticulously examined.

Imaginative solutions to apparently difficult problems can be found.”⁴⁹ In addition, BOT proponents contend that the attraction of “experienced contractors, engineers, consultants, financiers, lawyers and other professionals” to a locality to participate in a project “can have powerful repercussions at the level of technology transfer and exchange. Access can be gained to ideas, information and expertise extending well beyond that which is available” locally.⁵⁰

Finally, the use of BOT contracting may appeal to public authorities for two additional reasons. First, it allows them to “attract private sector funding and involvement, without incurring the adverse political repercussions sometimes associated with full-scale privatization. Government retains a significant role and can guard against any private sector excesses. It can also retain ownership of the assets in question, and avoid charges of ‘selling out’” quintessentially public facilities and functions to private interests.⁵¹ Furthermore, the construction of an efficient and effective public facility or infrastructure using the BOT technique would establish a “benchmark” against which the cost and efficiency of construction and operation of other public projects can be measured.⁵² Even if the public authority were to later return to conventional public contracting, the knowledge and experience gained from the BOT project might help “foster[] the efficient management of the public sector.”⁵³

DISADVANTAGES TO BOTS

There are downsides to the BOT scheme that may undermine the success and spread of its use. For instance, governments face the quandary that outsourcing the construction of public facilities and infrastructure to private sector entities, whose interest lies in optimizing their eco-

nommic rate of return, may conflict with the public interest in other aspects of the construction, such as its environmental impact or the availability to disadvantaged segments of the community of low- or no-cost access to such facilities or infrastructure.⁵⁴ Proponents of BOT contend that a balance can be achieved:

No one would pretend, of course, that the private sector can give absolute priority to the social dimension of infrastructure development. In many respects, the private sector simply cannot operate effectively on the basis of such priorities. Priorities of this kind, however, are precisely the responsibility of Government. [Public-private partnerships, like BOT,] seek to reconcile and synthesize these different approaches, so that the private sector’s strengths and resources can be used to best advantage.⁵⁵

But critics see dangers from the start to finish of BOT projects. First, some contend that “[t]he private sector will naturally be most interested in those projects or enterprises which have the greatest potential to be ‘commercially’ profitable. Projects which are not commercially viable, even though they may be equally or even more vital for the provision of an essential public service, will be left for governments and tax-payers to finance. This means that there will always be a market-driven tendency to transfer profit-generating activities to the private sector, while transferring unprofitable activities to the state sector.”⁵⁶ Second, it is perceived that, because “[p]rivate companies are ultimately only accountable to their share holders, whose dividends should be maximized], . . . [w]here a project fails to deliver its promised benefits, or results in negative local impacts, the natural tendency of private developers will always be to transfer as much responsibility and cost of this as possible on to the state and local communities.”⁵⁷

Furthermore, a question remains as to whether the construction and operation of public facilities and infrastructure are even proper subjects for outsourcing by governments. Those who agree with former Governor Cuomo’s statement above would likely say yes, and the growing use of BOT

around the world may be spreading that sentiment:

Downstream conversion of primary energy to electricity . . . has been regarded as almost wholly public sector domain. In this area, ownership and financing has traditionally been a function of government, because the supply of electricity has been seen exclusively as a public responsibility. * * * Although electricity supply remains essentially a public service, the view that governments must exclusively own, operate and finance it is no longer regarded as sacred.⁵⁸

However, some question whether, if not all then at least certain, public institutions should “be privatized, or is that an abdication of a central responsibility?”⁵⁹ In this view, some public facilities and infrastructure, like prisons, are so “inherently public” that their construction and operation should not be entrusted to private entities, even at a substantial savings.⁶⁰

Even if the idea of using BOT to build public facilities and infrastructure is accepted there are still practical problems with the technique that may hinder its success. For instance, it is generally very difficult to accurately estimate at the start of a BOT project the level of demand, and thus the amount of income to the concessionaire, that the facility will engender during the operation period. This presents a dual risk: the concessionaire may not receive revenues sufficient to recover its construction costs and earn a profit, and the government could incur a hefty financial liability if it guaranteed the concessionaire a certain level of demand and/or income. The risk, moreover, has already been shown to be very real. “This was seen in the Channel Tunnel project between Britain and France, one of the first European privately financed BOT projects.”⁶¹ Moreover, the Dulles Greenway—“a privately financed road west of Dulles Airport—is in serious trouble: toll revenues are a small fraction of what was anticipated, and there are big questions as to whether it will be able to survive as a private entity.”⁶²

As a result, it is believed that “[i]n most large BOT projects the private sector has only been willing to participate if govern-

ments . . . assume a significant portion of the project risks.”⁶³ Such assumption of risk generally takes the form of financial guarantees to the concessionaire, such as preferential tax treatment, grants, debt contributions, revenue guarantees, investment in the concessionaire, and restrictions on competition. In this case, however, the solution may be worse than the problem. In reducing or eliminating the risk of an uncertain revenue stream, an inherent risk of facilities construction and operation commonly assumed by owners and contractors on private sector projects, such government guarantees may distort the effect of the free market, the very engine of efficiency and reduced cost that the private sector’s participation is supposed to bring to BOT projects. As one author has suggested, “[t]he notion that the private sector is inherently more efficient and less wasteful than the state can only be supported in situations of vigorous competition, a free market principle which tends to be conspicuously absent in the case of public infrastructure projects. When private developers are provided with subsidies, guarantees and protection against competition there is no evidence that efficiency gains will be made.”⁶⁴ This flaw was perceived as far back as

when the railways were being set up and built [in India] during British rule. ‘In India, if a railway company did not attain a minimum rate of return of, for example, 5%, the government made up the difference under the terms of a guarantee backed by its full power of taxation . . . but the guarantees removed the incentive for investors to monitor management performances while opening the way for promoters to negotiate so called “sweetheart” deals with construction and supply companies.’⁶⁵

In this way, overly generous subsidies and guarantees of a certain level of demand for or income from facilities or infrastructure may “tend to distort and undermine market realities, generate waste and corruption, and lead to less accountability in the use of public resources” by giving concessionaires the impression that they can “mint money at the expense of the . . . government.”⁶⁶

Government guarantees may distort the effect of the free market, the very engine of efficiency and reduced cost that the private sector’s participation is supposed to bring to BOT projects.

Moreover, subsidies and guarantees may counteract the expected benefit to the public coffers of outsourcing the financing, construction, and operation of facilities and infrastructure to the private sector. The primary boon to public agencies of BOT contracting lies in shifting the financial burden of financing, construction, and operation to a private sector better able to bear them. But American governments forced to generously underwrite and ensure the private sector's success on BOT projects may find, like the government of Laos, that the burden has shifted right back:

[In the building of the Nam Theun II dam in that country,] the Government is required to provide financial guarantees which protect the private investor against the nationalising [sic] of private assets, renegeing on loans, and the threat of political instability. The amount of the guarantee for the Nam Theun II project is 20% of the total project cost. * * * The cost of this guarantee has to be carried by Laos. This is on top of raising the money to cover the Government of Lao's 25% share in the consortium. All these costs will add to this country's foreign debt burden.⁶⁷

Compounding the problem, the public authority may find itself guaranteeing the concessionaire's funding "while having little control over whether those funds are used efficiently."⁶⁸ Thus, as one critic put it, "[w]hile the application of the BOT model seems to depend heavily on mechanisms which guarantee the private sector against loss, there seems to be no corresponding mechanisms which guarantee that the projects lead to net gains and benefits for the governments and local people concerned."⁶⁹

Finally, opponents of BOT projects contend that they do not ensure that the public will reap the supposed benefits of innovation and technology transfer during the project or a well-maintained, state-of-the-art facility at the end of the concession period. As for innovation, the perceived flaw lies in the number and variety of participants that must be part of a concessionaire in order to fulfill its multiple responsibilities over the course of a BOT project:

One would expect the participation of many organizations with a wide range of expertise should result in an efficient and effective design. However, the case studies show that, in most of the cases, a conservative design and construction was adopted. This is driven by the concessionaire's attitude to reduce risks and costs. Tested design and construction methods are widely adopted in BOT projects, with innovative ideas employed only when it will make the facility more profitable in the long run. * * * One of the major advantages of having so many participants is the fact that the design will satisfy all parties on completion. Consequently, the disadvantage is that the design will compromise the tastes of all those involved and the design process will be more time consuming. * * * The same observations can be made for construction as with the design process: selection of conservative, well tested methods and materials that pose little risk.⁷⁰

Also, in the view of critics, there is little or no assurance of technology transfer, as "there is hardly any incentive for the project company to pay more than lip service to technical training and skills transfer programs of personnel that would assume operation and maintenance of the project after the transfer of the project. There is little or no motivation for the project company to involve the local private industry in the building of the . . . infrastructure and thereby effect transfer of technology. It is more financially beneficial for the company to work with its subsidiaries and/or companies with which the sponsor has had an established working relationship than with a local company."⁷¹ Analogously, it is believed that there is little or no assurance of the quality of the facility transferred back to the principal at the end of decades of private operation.

The primary goal of an investor when undertaking a BOT project is to secure adequate return on investment before the term of the concession runs out. The motivation to ensure the viability of the facility after the term of the concession is therefore relatively weak. Though this can be reinforced by the government offering the investor a role in running the project after the term of the concession is determined, the likelihood of maintenance and capital replacement costs being kept at a minimum is very high. It can also be argued that due to the length of the

term of the concession, the [facility] may have become obsolete by the time of transfer and could need major rehabilitation or require more resources to operate than a new facility. Power generation plants in particular have a finite life span and the cost of decommissioning them can be enormous.⁷²

Therefore, critics contend that, “[w]ith many BOT projects it may be relevant to ask if the state will ultimately inherit an asset or a liability.”⁷³

CONCLUSION

The future of BOT contracting as an element of, much less the model for, the construction of public facilities and infrastructure in the United States and elsewhere is uncertain. The method is still primarily used overseas by struggling, debt-ridden countries whose national treasuries are dwarfed by the treasuries of some of our larger states. Moreover, legislation authorizing BOT’s use is in place in only a few American jurisdictions, and, even there, some early experiences with the technique have been less than encouraging. Further, like any new technique, BOT does suffer from demonstrated, as well as other perceived, flaws. Nonetheless, the BOT model of public construction does offer attractive benefits to public authorities with more will than wallet.

In sum, “[a]lthough it has several attractions, the main one being that the needed infrastructure can be built without employing public funds or directly raising the debt profile of the country, the [BOT] scheme in itself does not automatically guarantee many of its purported attractions and does not in fact provide some of them. These problems however should not constitute a total bar in the use of the BOT scheme The reality is that [governments] have huge [infrastructure] needs, which if not met will continue to affect their economic growth. Furthermore, it is quite clear that governments are no longer able to meet all these needs. At present, the BOT scheme provides one of the better options”⁷⁴ ■

NOTES

¹Though this article concerns BOT contracting

in the public sector, it should be kept in mind that “the private sector may initiate BOT projects when there are limited funds available and there are not enough resources to execute successfully a required building project. Examples can be seen in non-profit hospitals and educational institutions as well as manufacturing facilities.” Prof. Drs. Ir. Sebastiaan C.M. Menheere and Prof. Spiro N. Pollalis, *Case Studies on Build Operate Transfer* (1996).

²Prof. Drs. Ir. Sebastiaan C.M. Menheere and Prof. Spiro N. Pollalis, *Case Studies on Build Operate Transfer* (1996).

³*Id.*

⁴Adeoye Adefulu, *Downstream Energy Financing in Developing Countries: Are BOTs the Answer?*, CEPMLP Annual Review 3, 1999–Article 1 (The Centre for Energy, Petroleum and Mineral Law and Policy 2000).

⁵*Id.*; Prof. Drs. Ir. Sebastiaan C.M. Menheere and Prof. Spiro N. Pollalis, *Case Studies on Build Operate Transfer* 9-11 (1996).

⁶*Public-Private Partnerships: Terms Related to Building and Facility Partnerships*, GAO/IGD-99-71 (United States General Accounting Office, April 1999); Adeoye Adefulu, *Downstream Energy Financing in Developing Countries: Are BOTs the Answer?*, CEPMLP Annual Review 3, 1999–Article 1 (The Centre for Energy, Petroleum and Mineral Law and Policy 2000).

⁷Adeoye Adefulu, *Downstream Energy Financing in Developing Countries: Are BOTs the Answer?*, CEPMLP Annual Review 3, 1999–Article 1 (The Centre for Energy, Petroleum and Mineral Law and Policy 2000).

⁸*Public-Private Partnerships: Terms Related to Building and Facility Partnerships*, GAO/IGD-99-71 (United States General Accounting Office, April 1999).

⁹*Id.*

¹⁰*Id.*

¹¹Prof. Drs. Ir. Sebastiaan C.M. Menheere and Prof. Spiro N. Pollalis, *Case Studies on Build Operate Transfer* (1996).

¹²Yüksel Oktay, *Power Generation in Turkey* (The Society of Turkish American Architects, Engineers and Scientists, Inc. 1998).

¹³*Id.*

¹⁴*The Future of American Infrastructure: A Two-Day Conference to Consider New Ways to Use Old Solutions* (MIT Center for Transportation & Logistics 2002).

¹⁵Prof. Drs. Ir. Sebastiaan C.M. Menheere and Prof. Spiro N. Pollalis, *Case Studies on Build Operate Transfer* (1996).

¹⁶*Build-Operate-Lease or Transfer Study*, Executive Summary (Wisconsin Dept. of Transportation 1999).

¹⁷*Id.*

¹⁸511 U.S. 383 (1994).

¹⁹511 U.S. at 387 (citations omitted).

- ²⁰*Id.* at 388 (citations omitted).
- ²¹1989 Cal. Stat. Ch. 107.
- ²²*Id.*
- ²³*Id.*
- ²⁴Cal. Sts. and Hy. Code § 143.
- ²⁵*Id.*
- ²⁶*Id.*
- ²⁷13 Cal. App. 4th 585, 16 Cal Rptr. 2d 599 (1st Dist. 1993)
- ²⁸2002 Cal. Stats. Ch. 688.
- ²⁹*Id.*
- ³⁰420 ILCS 20/5(b) (2002).
- ³¹*Id.*
- ³²Wis. Stat. § 84.01(30) (2001).
- ³³*Id.*
- ³⁴*Id.*
- ³⁵Minnesota Statutes §§ 160.84 *et seq.*
- ³⁶North Dakota Century Code §§ 48-02.1-01 *et seq.*
- ³⁷N.D. Cent. Code § 48-02.1-09(5); Minn. Stat. § 160.86(f).
- ³⁸Minn. Stat. § 160.85(7).
- ³⁹Prof. Drs. Ir. Sebastiaan C.M. Menheere and Prof. Spiro N. Pollalis, *Case Studies on Build Operate Transfer* (1996).
- ⁴⁰*Public/Private Partnerships: A New Concept for Development*, United Nations Economic Commission for Europe (Sept. 13, 1999).
- ⁴¹*Id.*
- ⁴²*Id.*
- ⁴³*Build-Operate-Lease or Transfer Study*, Executive Summary (Wisconsin Dept. of Transportation 1999).
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