

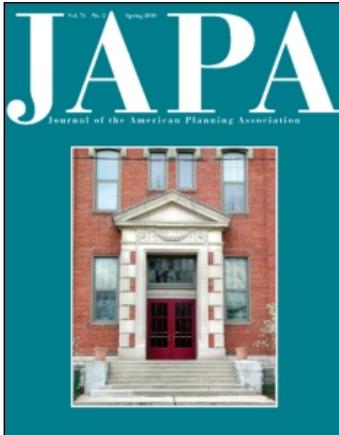
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What's the Secret?

Confidentiality in Planning Infrastructure Using Public/Private Partnerships

Matti Siemiatycki

Problem: Information is often suppressed when public infrastructure is planned by design-build-finance-operate (DFBO) public/private partnerships, an increasingly popular strategy for procuring transportation facilities, hospitals, and schools.

Purpose: I aim to identify strategies to increase transparency and accountability in large infrastructure projects delivered through public/private partnerships.

Methods: I studied the case of an award winning public/private partnership to plan a rapid rail line in Vancouver by comparing confidential documents released after project approval to the information available while planning was underway.

Results and conclusions: I find that although this project followed many best practices for achieving accountable and transparent public/private partnerships, in some instances it kept unfavorable study results from public view, limiting the potential for meaningful public involvement in the planning process.

Takeaway for practice: I identify the following strategies to increase transparency and accountability in large infrastructure projects, including those delivered through private-public partnerships: (1) using a clear and narrow standard for what information should be kept confidential; (2) ensuring that public officials with responsibility for project decisions and their staffs have full access to all project information, including that not made public; (3) appointing a watchdog to see that these standards are upheld; and (4) implementing a decision process that allows public input and places the burden for proving that information should remain confidential on the entity making the request.

Around the world, partnerships between the public and private sectors have become increasingly popular for delivering large public-use infrastructure such as roads and urban railways, water and waste treatment facilities, hospitals, and schools. The United States, Canada, Britain, Australia, Singapore, and Ireland have all created special programs to support and encourage the partnership model of project delivery.

A 2005 study by AECOM consultants found that since 1985 over 1,100 projects worth \$450 billion worldwide have been delivered and financed through public/private partnerships. In the United States, a relative latecomer to this model of project delivery, 364 projects worth over \$100 billion have been delivered or are planned for development (AECOM, 2005; Ashley, Bauman, Carroll, Diekmann, & Finlayson, 1998). Collaborations that involve the private sector in the design, building, financing, and operation phases (known as DBFO partnerships) have recently become common ways for governments to get help both raising funds for new public infrastructure and controlling the escalating construction costs and performance shortfalls that had been criticized in projects designed, financed, and operated by the public sector (Flyvbjerg, Bruzelius, & Rothengatter, 2003; Pickrell, 1992). Proponents contend that DBFO public/private partnerships will lead to more accountable and transparent planning processes than publicly driven procurement models, since they better control for risk and deliver improved project outcomes (Grimsey & Lewis, 2004). A 2003 study by the United Kingdom's Treasury Office found that DBFO public/private partnerships (called private finance initiatives in the United Kingdom) resulted in fewer cost overruns and time delays and better project performance than projects delivered directly by the state (HM Treasury, 2003).

Keywords: confidentiality, public/private partnership, design-build, infrastructure

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About the author:

Matti Siemiatycki (m.siemiatycki@lbss.gla.ac.uk) is a research fellow in the Department of Urban Studies at the University of Glasgow.

His research focuses on transportation planning and finance, and the delivery of urban megaprojects.

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Despite the claims of DBFO proponents, the DBFO partnership procurement model does require confidentiality at various stages of the planning process. Guidelines for structuring and planning projects using DBFO partnerships from the United States (U.S. Department of Transportation, 2006), the United Nations (2000), Canada (Private-Public Partnership Office, Industry Canada, 2003) and Ireland (Ireland Department of Finance, 2003) have each highlighted the need for confidentiality of commercially sensitive information in order to maintain the intellectual property of the bidders, the integrity of the competitive tendering process, and the public sector's power to bargain for the best long-term value.

Studies of public/private partnerships to date have generally left issues related to uneven access to information, the particulars of deal negotiations, and the potential to achieve meaningful public consultation within the planning process largely unexamined (Miraftab, 2004; Sagalyn, 2007), although policymakers and planners of public/private partnerships have acknowledged that issues of data disclosure and public engagement are significant. A briefing note posted on the U.S. Department of Transportation website (Hedlund & Chase, 2005) observed that project delivery using public/private partnerships requires a delicate balance: "On the one hand, disclosure of proposed projects is necessary for them to gain public legitimacy. On the other hand, the private sector will be unwilling to participate if certain information about them and their business secrets must be disclosed" (p. 9).

In this article, I examine whether the DFBO model of project delivery is congruent with public accountability. First I contrast the benefits of accountable and transparent public decision making with those of maintaining confidentiality in delivering projects using DBFO partnerships. Then I explore a case study of an urban rail line (the Canada Line), approved in 2004 to connect central Vancouver, BC with the local airport and the municipality of Richmond.¹ The Canada Line case is unique because requests made under British Columbia's Freedom of Information and Protection of Privacy Act between 2004 and 2006 yielded many of the original technical, financial, and planning documents for the Canada Line, unlike other projects, for which these documents have not systematically been made available (World Bank, 2003). Using these documents, interviews with politicians and project planners, and media reports, I examine whether the information kept confidential in the Canada Line case matched the rationales put forward in the literature; whether publicly released summary documents accurately represented the information contained in the confidential documents; and how releasing less than complete information affected the

public's ability to be meaningfully involved in the Canada Line planning process. Finally, I draw conclusions from the Canada Line planning experience and identify recommendations to improve transparency and accountability as part of the DBFO project planning process.

The Rationale for Confidentiality in DBFO Partnerships

According to the U.S. Department of Transportation (2006), partnerships between the private and public sectors to deliver infrastructure projects can be classified on a spectrum ranging from greater public responsibility to greater private responsibility. In traditional public sector procurements known as design-bid-build contracts, governments partnered with the private sector by carrying out two separate tendering processes: first for the design of the new facility, and second for a firm to construct the project based on a predesigned plan. Typically, the infrastructure was financed, owned, operated, and maintained by the public sector.

By contrast, most contemporary models of public/private partnership bundle services into a single concession. For instance, Build-Operate-Transfer (BOT) style partnerships include facility design, construction, operation, and maintenance in a single, competitively tendered concession, with ownership reverting to the public sector at the end of the specified operating period. The DBFO type of partnership is an extension of the BOT style of partnership, and also calls on the private sector to partially or entirely finance the project, and be repaid for the initial capital investment plus profit over the life of a long-term operating contract. While the components of any single concessionary tender may include different services, all are driven by the same rationale: to shift the role of government from that of provider to that of purchaser of public services, with efficiencies achieved by transferring responsibilities and risk to the private sector (Debande, 2002).

The DBFO Project Delivery Model

The rationale for keeping certain data confidential as part of the DBFO partnership model stems from the nature of the relationship between the private and public sectors in this type of partnership, and the way that competition is infused directly into the procurement process. Although some aspects of each DBFO procurement process must be adapted to the specific local context, much is relatively standardized no matter where in the world it occurs. According to the Canadian government's Private-Public Partnership Office (2003), each procurement follows

a similar set of three basic steps: project definition; initiation of a competitive tendering process; and selection and contracting with the winning concessionaire.

In the first step of the DBFO procurement process, the responsible public sector agency defines the set of objectives and benefits that the project is intended to deliver. Once the objectives for the project are defined, the public sector agency begins a competitive tendering process that invites private sector concessionaires to propose technical solutions to meet the government's performance criteria. These private sector concessionaires are also typically invited to either entirely or partially fund the capital costs of the infrastructure.

In Europe and Asia, DBFO projects are often funded entirely through private sector capital. In the United States, there is considerable variation in the degree to which projects are privately funded, as it is often more cost-effective for public agencies to raise funds directly than to rely on the private sector, because public entities have access to low-interest, tax-free, debt financing. Regardless of the exact sources of financing, all DBFO projects leverage initial expenditures with the project's long-term revenue streams, such as user fees, property value increases, expected tax revenues, and public subsidies where necessary (U.S. Department of Transportation, 2006).

Finally, in the third step of the DBFO procurement process, the winning bidder is selected primarily based on the governmental entity's assessment of whose system design would best meet their performance specifications at the lowest cost over the entire lifetime of the contract. They also often consider variables other than cost in deciding which proposal to select, for example evaluating the expertise of the project team to ensure that the successful concessionaire can actually deliver the project.

Once constructed, the physical infrastructure is typically operated privately, while ownership remains publicly held. The entire initial private sector investment including a margin for profit is repaid to the concessionaire over the contractual period of operation, usually lasting between 30 and 50 years, and at the end of this period the public sector agency may either retender or begin to operate the system using public sector employees (Debande, 2002).

In the DBFO procurement process, innovation and cost cutting is not achieved through an inherent superiority of the private sector over government; rather it is seen to be the result of harnessing the profit motive of investors through a competitive selection process (HM Treasury, 2000). Additionally, a key motivation for procuring infrastructure through a DBFO style partnership is to transfer certain types of risk, such as the potential for cost overruns or usage shortfalls, from the public sector to a private entity

better able to manage them. Specifically, since private investors have their own capital at stake in the construction phase of the project, and repayment is often linked to the amount of user fees collected, it is argued that private concessionaires have additional incentives to dispassionately vet the viability of project proposals and then implement strict project management controls (Flyvbjerg et al., 2003).

Accountability and the Public Interest

The DBFO partnership model provides theoretical rationales for both public accountability and confidentiality. Advocates of DBFO-style partnerships highlight the need for procedural accountability to prevent cost overruns and performance shortfalls that have plagued large-scale public infrastructure projects in the past (Flyvbjerg et al., 2003; Flyvbjerg, Holm, & Buhl, 2005). Grimsey and Lewis (2004) suggest that the step-by-step decision making process formalized in the public/private partnership delivery model provides an ideal framework within which to enshrine the highest standards of public accountability, standards often missing from conventional state-directed infrastructure projects.

Government guidelines and manuals for delivering public/private partnerships have flagged the need for ongoing meaningful consultations with staff, stakeholders, and the general public throughout the DBFO planning process, in order to gain input on project objectives and desired system features (Private-Public Partnership Office, Industry Canada, 2003; U.S. Department of Transportation, 2006). In the United Kingdom, the Institute for Public Policy Research's (2001) Commission on Public/Private Partnerships established a set of principles for evaluating the accountability of a planning process which included disclosing key information and making processes sufficiently transparent to permit public scrutiny of decision making; identifying the individuals and organizations answerable for each decision; and setting out procedures for citizens to file grievances and seek redress if they feel adversely impacted by a decision.

Taking a wider view, academic analysts have identified transparency and public involvement in the DBFO planning process as the link between project planning and the wider democratic decision-making process, as well as a key mechanism to ensure that selected projects achieve their stated objectives (Demirag, Dubnick, & Khadaroo, 2004; Grimsey & Lewis, 2004; Malone, 2005). For Flyvbjerg et al. (2003), transparency is the primary means of enforcing accountability in public-sector decision making:

The role of government is, in principle, to represent and protect the public interest (as defined by Parlia-

ment or legal precedent) and therefore it must at all times be possible for the public to verify whether this is indeed the case. The transparency requirement means, *inter alia*, that . . . all documents prepared or commissioned by the government should be released to groups and to the general public as they are produced. (p. 111)

The Need for Confidentiality in Project Planning

Despite a broad consensus on the benefits of creating systems to ensure accountable decision making as part of the DBFO procurement process, international governmental bodies established to manage public/private partnerships have highlighted the need to keep certain information confidential. While rationales for secrecy differ at each stage of the planning process, all relate to establishing a competitive tendering process which provides the private sector with incentives to deliver innovative and cost effective technical designs at the lowest possible cost.

Early in the DBFO planning process the public sector agencies generally release a project definition report that outlines the project objectives, performance specifications, and some of the goals for delivering the infrastructure as a DBFO public/private partnership. It is also standard to produce a public sector comparator, which is an estimate of the cost of delivering the project as a conventional state-delivered project. The public sector comparator, which is updated throughout the tendering process, is used as a benchmark against which to evaluate the DBFO-style public/private partnership. However, key details from the public sector comparator document are typically kept confidential from the bidders and the general public (Irish Department of Finance, 2003). According to Industry Canada's *Best Practices Guide* (2003), while releasing some financial and operating assumptions early in the planning process may spur innovation from the private bidders, detailed cost, risk, and design information should not be disclosed, as this may weaken the public sector's negotiating position with the winning bidder.

During the competition to select the winning bidder, the need for confidentiality is primarily related to ensuring the integrity and fairness of the bidding process. Since a robust competition is seen as central to the achievement of innovative and cost-effective projects in the DBFO partnership model, strict rules are put in place to ensure equal treatment of all bidders. In particular, the government entity conducting the tendering process is usually not permitted to release commercially sensitive bidder information that divulges innovative system techniques, corporate strategies, or delivery mechanisms. Thus, the precise details

contained in each proposal are typically kept confidential, as are the government's tender evaluation reports, which may also contain information on the merits of one proposal over another. In the United States, for instance, state laws enabling public/private partnerships in the transport sector have often included clauses that permit bidders to apply to have proprietary data withheld from applicable information disclosure laws (U.S. Department of Transportation, 2006; see, e.g., state regulations in Washington, Indiana, and Virginia).² Details from unsuccessful bids are also typically kept confidential, as the release of such information may be seen as an undue cost of doing business with the government, and reduce interest in future tenders (Barrett, 2003; United Nations, 2000). This is often the case even when losing bidders are paid by the procuring agency for participating in the competition.

The Australian National Audit Office (2001) has developed a set of criteria that define commercially sensitive information as narrowly as possible without infringing on the intellectual property rights of individual companies, so as to make as much information as possible available to the general public (Table 1). These criteria were developed based on ongoing efforts in Australia to achieve efficient, accountable and transparent public sector procurements, and I will use them later to evaluate the Canada Line planning process.

Finally, during the selection and contractual negotiations with the winning bidder that comprise the last phase of the DBFO planning process, some argue that confidentiality may strengthen the bargaining position of the public sector negotiators as they seek a contract that delivers the greatest level of public benefit. It is suggested that the public release of certain information, such as exactly what public funds are available or which system features can be cut in order to save costs, could influence the negotiation tactics of the private sector and therefore ultimately lead to less effective projects (Kalt, Jaffe, Jones, & Felder, 1996; Maria, 2001).

Despite the legitimate need to maintain confidentiality of commercially sensitive information in certain contexts, the Australasian Council of Auditors General (1997) raised questions about the motivations for restricting access to information:

Recent experiences in Australia would indicate that Government agencies are tending to use the pretext of commercial confidentiality as a shield against the disclosure of information which is commercially embarrassing to the Government or which raises issues of probity.

The statement from the Australasian Council of Auditors General echoes criticisms of the DBFO planning processes that have been leveled by labor unions and activists seeking to be meaningfully involved in the planning of new infrastructure projects, or evaluating the merits of the public/private partnership planning approach (Canadian Union of Public Employees, 2004).

Although expert sources explicitly recognize that public accountability is critical to delivering an effective public infrastructure project, they also provide rationales for confidentiality as part of the DBFO procurement model. The following section examines the implications of these conflicting needs for accountability and confidentiality in the DBFO planning process using a case study of the Canada Line in Vancouver.

Inside the Planning of the Canada Line

A region of 2.2 million inhabitants located in the Pacific coast province of British Columbia, Greater Vancouver has a rich history of proactive transportation and land use planning (Cervero, 2001). A defining moment came in the late 1960s when citizen protests led to the halting of plans to blanket the region with an extensive new freeway network. This has left Greater Vancouver as one of the few major urban regions in North America without direct expressway access to the city center or the international airport (Punter, 2003).

Instead, planning in Greater Vancouver has focused on investments in rapid transit infrastructure as a catalyst for the development of compact mixed-use communities.

Since the mid-1970s, all major strategic transportation plans in Greater Vancouver have included proposals for a north-south rapid transit connection between the growing municipality of Richmond and central Vancouver. And yet the Vancouver-Richmond link has been repeatedly passed over in favor of other priorities (see Figure 1): first for the Expo Skytrain line (a type of automated light rail) that ran east from Vancouver to Burnaby, New Westminster, and Surrey; and later for the Millennium Skytrain line that ran east from Broadway along the Lougheed corridor. Each of these projects was delivered directly by the government, and the processes were highly politicized and lacked transparency and accountability (Siemiatycki, 2006a).

In the late 1990s, a rail connection between Richmond and Vancouver with a spur on to the international airport reemerged as a top investment priority, and a partnership was formed between several government agencies to deliver the project. The subsequent election of a new right-of-center provincial government and the awarding of the 2010 Winter Olympic Games to Vancouver solidified the top position of the Richmond-Airport-Vancouver line (called the Canada Line; see Figure 1). While the Canada Line was not officially included in Vancouver's Olympic bid, the awarding of the games increased its local significance and added urgency to the timing of the project, since it would provide a smooth transit connection and positive first impression of Vancouver for the mass of visitors expected to visit the city. This encouraged the formation of a uniquely broad partnership between the local, provincial, and federal governments, as well as the airport authority and the Greater Vancouver Transportation Authority, in order to plan and finance the project.

Table 1. Definition of commercially sensitive information.

Information requiring confidentiality	Information not requiring confidentiality
<ul style="list-style-type: none"> • Nontrivial information not yet in the public domain and known only to a limited number of parties • Currently sensitive information only • Information which, if disclosed, would have commercial value to competitors. This includes internal pricing structures, trade secrets, and strategies for winning the tender competition • Tender evaluation reports, where they contain confidential information, or where their disclosure may be seen as an undue cost of working with government and therefore reduce participation in future bids 	<ul style="list-style-type: none"> • Performance criteria and financial guarantees • Indemnities • The price of an individual product or groups of goods or services • Rebate, liquidated damages, and service credit clauses • Clauses that describe how intellectual property rights will be handled • Payment arrangements

Source: Australian National Audit Office (2001).

Early in the planning process, these partners decided that the Canada Line would be delivered and partially financed as a DBFO-style public/private partnership, a decision reinforced when the provincial government of British Columbia made its financial contribution contingent on the project being delivered through a partnership (RAVCO, 2006). In 2002, the partners assembled an experienced project management team into a special-purpose public company called Richmond-Airport-Vancouver Project Management Ltd. (RAVCO).

RAVCO was established as a wholly owned subsidiary of the Greater Vancouver Transportation Authority, the public sector agency tasked with transportation planning throughout the region. RAVCO was charged with planning and delivering the Canada Line, as well as with lining up the necessary approvals and funding from each level of government and the private sector in order to pay for the project. During the planning process, RAVCO hired a series of expert consultants from around the world to provide advice on matters related to technical design, project finance and management, and public engagement (RAVCO, 2003).

RAVCO officials recognized the challenge involved in balancing “the public interest in disclosure and the public interest in a vibrant competitive process to procure the RAV line” (RAVCO, 2004a, p. 7). To overcome this challenge, RAVCO designed a project procurement process that matched the international best practices for delivering a DBFO public/private partnership, and also developed a mission statement that included “accountability,” “disclosure,” and “communication and consultation” as core company values (Canada Line, 2006). As part of achieving their mandate, RAVCO developed an accountability and transparency strategy that supported the public release of extensive documentation relating to ridership forecasts, land surveys, project definition reports, and information on the procurement process. They also designed a public consultation strategy that built on the results of previous local and regional planning processes, and included dozens of meetings with stakeholders, public hearings, and extensive community opinion polling, which took place at each stage of the procurement process.

Nevertheless, in line with the standard model of DBFO project procurement as described above, at each phase of the project delivery RAVCO withheld key documents from the public. Many of the confidential documents related to financial details of the project and the particular technical specifications of the systems that were proposed by each bidder. In an effort to maintain transparency, summaries of withheld documents were publicly released on RAVCO’s website, outlining the nature of the study

findings without breaching confidentiality. Some of these documents were later released following the final signature of the contract in the summer of 2005, and I and local civil society organizations obtained others through freedom of information requests.

Over the five-year process of planning the Canada Line the \$2 billion project became a lightning rod for local controversy due its high cost, the impact that construction would have on surrounding communities and businesses, and the merits of procuring it through a public/private partnership. Stakeholders including labor unions, a coalition of businesses expecting to be affected by the construction, environmentalists, social justice advocates, and even many local politicians complained that they could not be meaningfully involved in the planning process because key documents remained confidential (Siemiatycki, 2006b).

Since such a range of local stakeholders voiced dissatisfaction with their access to information, I review a series of key documents withheld from the public in the following section, and compare the content of each confidential document with the information released to the public. In each case, I examine whether the data were accurately classified as confidential based on the criteria proposed in the literature, and whether the publicly released summary documents accurately represented the information contained in the classified documents. I also briefly explore the impact that withholding this information had on public accountability and meaningful involvement in the Canada Line planning process.³

Step 1: Project Definition and Financial Feasibility

As part of the standard DBFO procurement model, RAVCO produced and publicly released a project definition report that established the objectives for the project, the desired system performance standards, a broad description of the expected project costs and operating assumptions, and the rationale for delivering the project as a public/private partnership. The project definition report explicitly avoided prescribing particular specifications for the project, but rather defined the parameters of a problem and encouraged the private sector to design innovative solutions that would deliver the greatest value for money (RAVCO, 2003). While the report did not select an ideal construction method, since this decision would be left to each individual bidder, it conveyed the assumption that the majority of underground sections would be constructed using a tunnel boring machine rather than more disruptive cut-and-cover methods.⁴

Supporting this study was a technical report on the financial feasibility of the project produced by Pricewater-

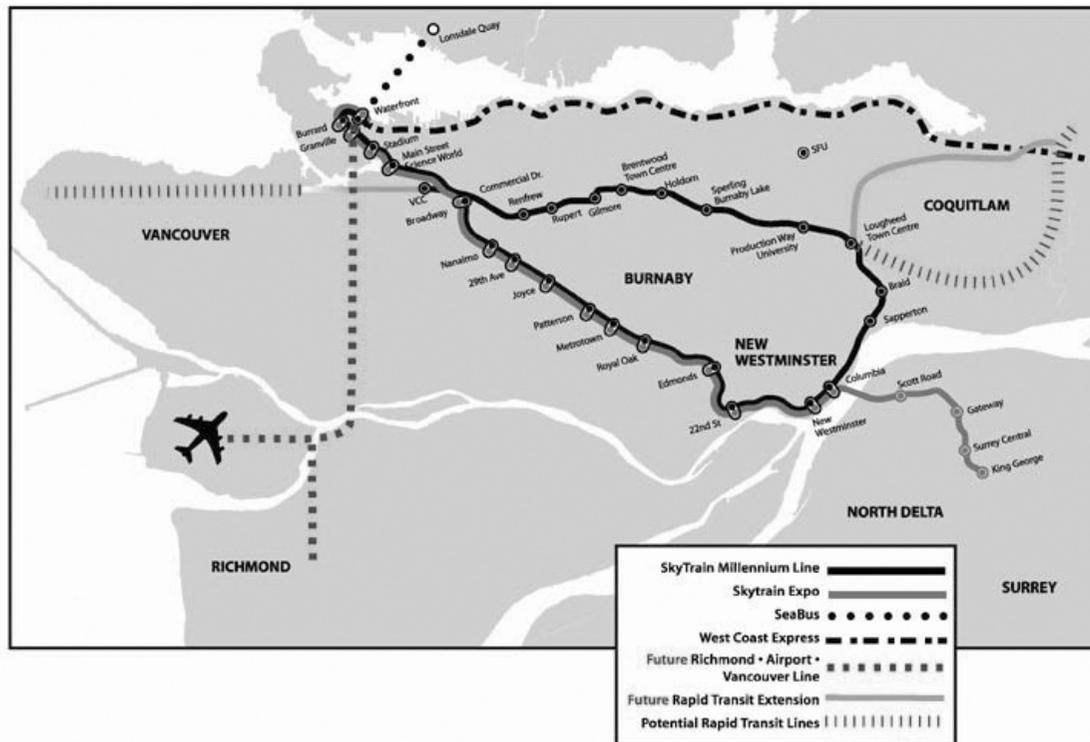


Figure 1. Current and proposed future rail network in Greater Vancouver, BC.

Note: The project called the Canada Line in this article is identified on this map as “Richmond-Airport-Vancouver Line.”

houseCoopers consultants for RAVCO that contained PriceWaterhouseCoopers’ forecasts of whether private concessionaires would likely include sufficient capital investment in their bids to make the project financially feasible, based on an examination of issues such as the potential technical specifications and amount of grade separation, cash flows based on projected ridership, risk allocation, and available public sector funding. According to a publicly released executive summary, the complete PricewaterhouseCoopers financial feasibility report “contains information and financial analysis that the Agencies wish to remain confidential in order to preserve their negotiating position” (PricewaterhouseCoopers, 2003a, p. 2).

A review of the 82-page full-length document, obtained through a freedom of information request, reveals why some of the information was considered sensitive. For instance, releasing information about the relative merits of different types of grade separation (i.e., aboveground, at grade, underground) and the likely allocation of risk between the private and public sector partners might have reduced innovation in the designs put forward by the bidders. Since the PricewaterhouseCoopers financial feasibility

report also noted that funds likely to be available from public and private sources would fall short of the estimated cost of the project by between \$40 and \$123 million, releasing the full report might have deterred some private firms from submitting bids, or led them to increase their prices to compensate for the risk that the project would be canceled (PricewaterhouseCoopers, 2003b).

By contrast, protected by the legitimate need to keep sensitive information confidential, the six-page publicly available executive summary highlighted the positive elements of the project without flagging some of the potential risks identified in the full PricewaterhouseCoopers report. Specifically, the executive summary provided only a general overview of the project definition and the public sector financing available, and concluded that the “financial projections for private sector involvement in the RAV Project indicate that the total costs of construction and operation could be met by the planned Agency contributions and private funding” (PricewaterhouseCoopers, 2003a, p. 5). It did not mention that the financial modeling contained in the complete report had revealed a funding gap, or the possibility that the public sector would be

required to contribute more money. The executive summary also stated that private sector delivery as part of a DBFO partnership has sometimes allowed savings in excess of 20%, though they might be lower for this project, even though the confidential report had predicted private sector involvement in the development of the Canada Line to yield only 5 to 10% efficiency savings (PricewaterhouseCoopers, 2003a).

Step 2: The Competitive Tendering Process

Because the project definition phase of the Canada Line planning process concluded that the system was technically feasible, and could be delivered as a DBFO public/private partnership within the allotted budget of between \$1.5 and \$1.7 billion (RAVCO, 2003) a competitive tendering process was commenced to select a winning bidder. Between 2002 and 2004, RAVCO used a multistage competition to reduce the number of bidders from 10 to 3, based on their potential to meet the performance objectives in the project definition at the lowest lifetime cost.

In March of 2004, the RAVCO-appointed evaluation committee further reduced the number of bidders from three to two. The evaluation committee was bound by strict confidentiality regulations. None of the information contained in any of the bids was released to the public, as the bids contained commercially sensitive information and intellectual property on train technologies, construction methods, route alignments, and prices. In the short term, this information was correctly kept confidential as recommended in the Australian Auditor General's report referred to earlier. Releasing such information at this intermediate point in the tendering process could have enabled bidders to learn from their competitors' specifications, and, by incorporating what they learned into their own proposals, devalued their competitors' unique and innovative techniques and processes for delivering efficiencies.

To deliver the greatest level of public transparency possible given the need for confidentiality, RAVCO released a summary report outlining the process through which consortiums led by SNC Lavalin and Bombardier had been selected to participate in the final stage of the competition, and a brief description of their proposals. No details were provided about the positive and negative aspects of each bid (RAVCO, 2004a). A report by the RAVCO-appointed fairness commissioner certified the integrity of the selection process (RAVCO, 2004b).⁵

Following the conclusion of the Canada Line procurement process, the complete evaluation committee report was released as a result of a freedom of information request. This exceeds the standard of information disclosure recom-

mended by the Australian National Audit Office (2001). The report contained information that would have enabled the general public to scrutinize and evaluate the system design and construction techniques proposed by each bidder, topics that became important as businesses along the proposed route worried about the duration of road closures. In particular, it showed that SNC Lavalin proposed to construct a considerably larger section of the line using open-pit cut-and-cover than had previously been announced to the public, or was put forward in the Bombardier bid. While it was said this would save time and cost over tunneling alternatives, and would generate greater ridership by making the stations more accessible, the evaluation committee said cut-and-cover construction would be considerably more disruptive than tunneling, and as a result was widely opposed by local residents and merchants. (Figure 2 shows a commercial area near the Canada Line while construction was underway.)

The evaluation committee also identified other attributes of the proposals that might have been useful for the public to know in advance. For instance, the evaluation committee made several positive observations about Bombardier, whose bid used proven technology and had a good third-party consultation program, but had the highest price of any of the proposals and transferred only a small part of project risk to the private sector partner. By contrast, SNC Lavalin was praised for submitting the most innovative proposal, at the lowest price, transferring a high level of risk to the private sector, and achieving the highest predicted ridership, but their bid had a "very weak" third-party consultation program (RAVCO, 2004c, p. 15). And, in an appendix on "issues brought to the attention of the RAVCO Board of Directors for consideration" in preparation for future stages of the procurement process, the evaluation committee put the ambiguous statement, "very aggressive pricing" at the top of the list of features it noted in the first-ranked SNC Lavalin proposal (RAVCO, 2004c, p. 29).

The Public Sector Comparator

At the same time as the competitive tendering process was taking place, PricewaterhouseCoopers, in conjunction with RAVCO management and staff, expert advisors, the regional transit authority, and the provincial government's central agency for delivering public/private partnerships called Partnerships BC, constructed a public sector comparator that would be the benchmark against which value for money of the DBFO proposal would be evaluated.

Citing the need to maintain the negotiating position of the government and the integrity of the late stages of the bidding process, as is consistent with international best

practices, none of the specific details of the public sector comparator were publicly released during the tendering process. In order to “contribute to the confidence of the community and other stakeholders” (KPMG, 2004, p. 1), RAVCO commissioned a series of independent reviews from KPMG consultants and George Morfitt, a former Auditor General of British Columbia. These certified that the public sector comparator had been developed using an appropriate methodology and assumptions consistent with Canadian and international practice, and that it ultimately provided a valid basis for estimating the costs and risks of delivering the project by the public sector (KPMG, 2004; Morfitt, 2004).

The full-length public sector comparator prepared at this stage was released through a freedom of information request following the conclusion of the Canada Line planning process. The report outlines the specific technical designs, service levels, project costs, risk allocations, and management expenses to be used if the project were to be delivered by the public sector. It also shows that a system delivered by the public sector would be constructed using a combination of deep-bore tunneling and cut-and-cover methods. Had this information been available during the planning process it could have lessened the technical innovativeness of bidders’ proposals, or their incentives to reduce costs significantly below those expected by the public sector.

Additionally, my examination of the public sector comparator within the historical context of transportation infrastructure investment in Vancouver highlights an underlying assumption that would shape the entire cost of the public sector benchmark: It was assumed that the Canada Line system developed by the public sector would use similar design, construction, operation, and maintenance specifications as Vancouver’s two existing Skytrain lines (PricewaterhouseCoopers, 2004a, p.4). This decision is not entirely surprising since Skytrain, a type of propulsion system for automated light rail vehicles owned by the Canadian engineering firm Bombardier (2007), is a familiar technology in Greater Vancouver. However, since the 1970s Skytrain technology has only been selected for implementation in a few jurisdictions, and has been found to have higher development costs than other light rail technologies (Babalik, 2000; Institute for Transport Studies, University of Leeds, 2002). Thus, since the public sector comparator did not evaluate how Skytrain compared against other available automated light rail systems, it may have artificially inflated the cost of the publicly delivered project used as a standard of comparison.

Lacking access to the information contained within the public sector comparator, the public was not able to ques-



Figure 2. Canada Line construction zone.

tion the assumptions underpinning it, even though it would be the standard used to determine whether a public/private partnership would deliver adequate value for money. Acknowledging the rationale for maintaining confidentiality of the data contained within the public sector comparator, local labor unions and some opposition politicians requested that the independent Auditor General of British Columbia review the public sector comparator, but this request was denied.

Value for Money

In March of 2004, with the bids narrowed to two and the public sector comparator constructed, the next step in the Canada Line planning process was to assess whether a successful private sector proposal could deliver greater value for money than the public sector alternative, and,

thus, warranted proceeding to the final stage of the DBFO procurement process. In order to carry out this analysis, PricewaterhouseCoopers evaluated the project laid out in the public sector comparator against the best proposal put forward to this point by the private sector, which was the SNC Lavalin bid. The document (PricewaterhouseCoopers, 2004b) contained detailed technical and price information from the SNC Lavalin bid, and therefore its release could have impacted the bidding behavior of their competition in the final round of the tender process. Instead, an executive summary of the value for money comparison was released.

The summary broadly defined the specifications of each bid (including that the public sector comparator was based on a Skytrain system), and highlighted both the strengths and limitations to the value for money comparison. It concluded that "The P3 [public/private partnership] Proposal offers significantly better value for money than the PSC [public sector comparator]. The statistical simulation implies that the probability of the PSC generating better value than the P3 Proposal is less than 5%" (RAVCO, 2004d, p. 3). Based on this finding, the project was approved to proceed to the final stage of the competitive tendering process.

My examination of the complete value for money report, obtained through a freedom of information request following the conclusion of the planning process, confirmed that the conclusions in the summary report were accurate. I also found greater detail on the cost breakdowns for both the private and public sector proposals, including the expected range of likely costs. The base cost of the SNC Lavalin proposal for delivering the project (before considering risks) as of March, 2004 was \$71 million more expensive than a comparable project procured by the public sector (Table 2). This was due to higher SNC Lavalin costs for construction, operation and maintenance, private financing, taxes, and RAVCO management expenses,⁶ which outweighed the value of the innovations their proposal was assessed as delivering through greater ridership revenue over the life of the project.

However, when I compare the March 2004 sum of all project costs and benefits over the entire lifecycle of the project in net present value terms, the public sector project is \$212 million more expensive than the best private sector proposal. This is because the public sector agencies retain considerably higher levels of risk for a conventionally delivered project than is true for a DBFO proposal like this one, particularly with respect to covering potential construction cost overruns. Additionally, in a conventional public sector project there is a greater chance of significant cost increases that would have to be borne by taxpayers,

since a wider range of risks remain the responsibility of the public sector (PricewaterhouseCoopers, 2004b).

Step 3: Selecting the Winning Bidder

In November of 2004, six months after approval to proceed to the final bidding stage, RAVCO announced that the bid which delivered the greatest level of benefit came from SNC Lavalin for an underground, automated rail system which would use an alternative to the proprietary Skytrain technology at a cost of \$1.899 billion. RAVCO's confidential evaluation committee report from this stage of the tendering process showed that the SNC Lavalin bid built on the strengths and improved upon the weaknesses of the company's earlier proposal: It had a substantially lower net cost than the Bombardier bid; transferred significant risk to the private sector; and had an improved third-party consultation plan.

In absolute terms, the bid was \$343 million greater than the available public and private sector funding (Boei, 2005, p. E1). A confidential value for money report conducted by PricewaterhouseCoopers at this stage of the procurement and obtained following the completion of the project found that the net cost of the winning SNC Lavalin proposal was \$1.731 billion. Because the updated value for money report used a lower discount rate, as prescribed by the Greater Vancouver Transportation Authority for the evaluation of transportation capital projects across the region, it is difficult to make direct cost comparisons with the earlier value for money report.⁷ However, as part of the report, when PricewaterhouseCoopers conducted a sensitivity analysis using a constant discount rate, the expected net cost of the winning proposal was \$1.624 billion, \$111 million above what had been estimated as the likely project cost at the "upper impact of risk" for a DBFO partnership only six months previously (PricewaterhouseCoopers, 2004c).

A summary report released publicly by RAVCO in November of 2004 stated that the cost escalation for the Canada Line since January of 2004 was the result of rapidly rising local construction and property prices, and necessary system design changes (RAVCO, 2004e). Some political advocates for the project claimed in the local media that these cost escalations could not have been foreseen (McMartin, 2004, p. B1). While construction and property costs in Greater Vancouver had escalated considerably and no explicit warning about cost increases had been made by project planners, the RAVCO evaluation committee's earlier note that the initial SNC Lavalin bid contained "very aggressive pricing" was ambiguous. Was it meant to suggest something about the potential for future cost increases? And if so, was the evaluation committee

Table 2. Comparison over time of expected net cost of the public sector comparator and best private sector Canada Line proposal (\$ millions, net present value, 2003).

	March 2004 (7% Discount Rate)		November 2004 (6% Discount Rate)		December 2005 (6% Discount Rate)	
	Public sector comparator	SNC Lavalin	Public sector comparator	SNC Lavalin	Public sector comparator	SNC Lavalin
Baseline project net present value (before risk)	1,588	1,623	1,848	2,038	1,821	1,999
Corrections ^a	0	95	30	69	0	91
RAVCO costs	113	177	104	138	98	120
Offsetting ridership revenue	-336	-459	-414	-553	-433	-581
Total net cost before risk ^b	1,365	1,436	1,568	1,692	1,486	1,629
Estimated net present value of risk ^c to the public sector	271	-12	257	38	263	30
Total expected net present value including risk (50% probability)	1,636	1,424	1,825	1,731	1,750	1,658
Total expected net present value, lower impact of risk (5% probability) ^d	1,431	1,394	1,598	1,632	1,521	1,568
Total expected net present value, upper impact of risk (95% probability) ^e	1,872	1,513	2,083	1,832	2,018	1,749

Notes:

- Corrections account for changes after the bid was submitted.
- Sum of baseline project net present value before risk, corrections, management costs incurred by RAVCO, and estimated ridership revenue. The ridership revenues differ for each proposal because they account for variations in system designs and service plans.
- This represents an estimate of the likely difference in the net cost of delivering the project from what is initially expected, taking account of such things as delays, unforeseen inflation and lack of service availability. The baseline assumption (50% probability) shows the impact that all risks taken together would have on the project's net cost.
- This represents the scenario if few of the possible risks identified actually impact the delivery of the Canada Line.
- This represents the scenario if most of the possible risks identified actually impact the delivery of the Canada Line.

Source: PricewaterhouseCoopers (2004a, 2004b, 2005).

signaling that the proposal was too good to refuse, or too good to be true?

The revised value for money report produced at this stage of the analysis found that the baseline cost of the SNC Lavalin bid was \$124 million more expensive than a comparable public sector project, which had been updated to account for increasing labor and resource costs. However, as had been found previously, once the risk of price escalations was factored in, the public sector comparator had a higher cost in net present value terms than the SNC Lavalin bid, as well as a wider range of potential costs associated with the upper and lower probability of risk scenarios (see Table 2).

The Final Concession

In the weeks that followed the announcement of the winning bid, RAVCO consulted with representatives from the different levels of government with stakes in the project in order to reduce the scope of the Canada Line, to within the \$1.72 billion in public and private funding available. The board of directors of the Greater Vancouver Transportation Authority gave final approval for the project in December of 2004. The process of selecting which features of the Canada Line to eliminate was confidential, because as one politician involved in the negotiations told a local newspaper, "we have to be dealing with corporations and so forth" (O'Brian, 2004, p. B1).

Not until after project approval in December 2004 did RAVCO publicly release details about how much of the Canada Line SNC Lavalin intended to construct by cut-and-cover, though this information had been part of the company's bid for nearly a year. The reports alarmed businesses and residents along the route, who claimed that they were never properly consulted about the extensive use of cut-and-cover construction. Some of the local politicians responsible for approving the RAV plans claimed they had not been provided details of the precise construction methods proposed. The general manager of the City of Vancouver's Engineering Services Department was reported in the local media to have said that while some of his staff had been aware of the proposed amount of cut-and-cover from examining the bids, they were not able to communicate these details to city council because of the confidentiality agreements they had signed before being permitted to review the documents (Smith, 2005). Despite public challenges, RAVCO CEO Jane Bird confirmed with the *Vancouver Sun* that the information about construction methods contained in the bids was proprietary to each of the final bidders and could not have been released earlier in the tendering process (Boei, 2005 p. A1).

Some 6 months later when the final contract between RAVCO and the SNC Lavalin consortium was signed in the summer of 2005, the cost of the project had escalated again to nearly \$2 billion, which would be covered by increases in funding from both the public and private sector partners. An updated value for money report produced in December of 2005 found that at a net cost of \$1.658 billion, the winning bid procured through a DBFO partnership would deliver \$92 million greater value for money than the comparable project designed and delivered by the public sector (see Table 2; RAVCO, 2006).

A detailed breakdown of the project costs showed that the SNC Lavalin bid had considerably higher expected costs for construction, operation and maintenance, private sector financing premiums, and RAVCO expenses (Table 3). Even though the SNC Lavalin system's design innovations were expected to deliver higher ridership revenue, the DBFO project only had a lower net present value than the comparable public sector project after the risk of cost escalations was factored in (PricewaterhouseCoopers, 2005). After allocating over 1,000 hours of staff time to reviewing the assumptions contained in RAVCO's report, the Auditor General of British Columbia certified that the value for money calculations had been accurately represented, although he expressed "no opinion as to whether the expected results will be achieved" (RAVCO, 2006, p. 1)

In the fall of 2005, with a final contract signed, RAVCO released original copies of the public sector com-

parators, the value for money reports, and the complete bid evaluation reports following a series of Freedom of Information Act requests. And subsequent to the beginning of construction, in April of 2006, RAVCO began releasing financial and technical information on their website that had previously been withheld, including details of the final concession agreement. This release of information met the Australian National Audit Office's standard for suitable public disclosure of commercially sensitive data.

Conclusion and Recommendations

When I examined documents typically kept confidential in the delivery of a DBFO style public/private partnership, I found that even though the award winning Canada Line procurement process followed, and in some cases exceeded, internationally accepted best practices for maintaining confidentiality, the information withheld reduced public transparency and the potential for meaningful oversight and involvement in the planning process. Behind the shield of confidentiality, the findings of technical studies were sometimes selectively released by the project planners, which accentuated the positive on issues such as the level of efficiency gains delivered by a public/private partnership and the potential likelihood that the project would require further public sector contributions. At the same time, details that could have raised public concern were often legitimately withheld, although in some cases, such as with the type of construction methods proposed by the two final bidders, it appears that controversial information was kept confidential longer than it was actually commercially sensitive. The lack of access to the full range of information during the planning process prevented the public and some of its representatives overseeing the project from questioning the merits of various aspects of the project as decisions were being made.

To be certain, the planners of the Canada Line were far more open about releasing information and rigorous in designing systems to ensure fairness and accountability than the public agencies planning Vancouver's previous two Skytrain lines using the conventional government project procurement model had been. This illustrates that the tension between confidentiality and transparency in the planning of large-scale infrastructure projects is not limited to public/private partnerships. Nor is this tension likely to be resolved by merely reverting to the traditional model of project delivery led by the public sector. Instead, any model of project delivery should provide both timely information and a transparent process that supports meaningful public

Table 3. Public sector comparator and SNC Lavalin proposal at financial close^a (\$ millions, net present value, 2003).

	Public sector comparator	SNC Lavalin	Difference
RAVCO costs ^b	98	120	-22
Construction costs	1,263	1,382	-119
Operation, maintenance, and lifecycle costs	559	576	-17
Private finance premium ^c	0	130	-130
Offsetting ridership revenue	-433	-581	148
Total net cost before risk	1,487	1,627	140
Construction risk (50% probability)	242	30	212
Operating period risk (50% probability)	21	0	21
Total expected cost	1,750	1,657	93

Notes:

- Financial close occurred on July 29, 2005. The value for money report for financial close was completed in December, 2005.
- This refers to the costs incurred by RAVCO to deliver the Canada Line, which include management expenses such as community consultation during construction and property costs.
- This represents the cost of interest and return on private finance, forecasted taxes, and reserves during the operating period, which would not be incurred if the project were delivered by the public sector.

Source: PricewaterhouseCoopers (2005)

engagement and maintains the legitimacy of the planning process.

Although the experiences of planning the Canada Line are not universally generalizable to DBFO projects in other contexts, the case study points to three strategies that may be used to improve the transparency and accountability of planning future public infrastructure projects without sacrificing the legitimate need for confidentiality in certain circumstances.

First, an independent information commissioner should be appointed, and project planners and private sector proponents should be required to demonstrate why they must withhold specific information from the public. Hearings on the merits of withholding information should be open to the public, who may submit arguments on why the information should remain in the public domain. This recommendation builds on a legal framework that has been implemented in some American states, such as Maryland, to manage the dissemination of information in public/private partnerships (U.S. Department of Transportation, 2006). Significantly, it reverses the current system in countries such as Canada, where project planners can classify information as confidential without an open hearing, and the burden falls on interested members of the public to apply to have it disclosed.

I recommend using the Australian Auditor General's criteria to classify information as confidential. In some circumstances these standards would permit earlier disclo-

sure of the detailed system designs, construction methods, and financial models contained in each proposal, since once all of the bids are submitted for evaluation and cannot be further revised, bidders cannot benefit by knowing the details of their competitors' proposals. The argument in favor of releasing some proprietary information is even stronger where losing bidders are provided with financial compensation for participating in the tendering process.

Second, even when information is legitimately withheld from the public, project planning documentation should not be withheld from any elected official directly responsible for deciding whether to approve or reject a project. Moreover, confidentiality clauses signed by bureaucrats taking part in the planning of a project must not limit their potential to communicate fully about the project with elected representatives. In democracies, elected officials are responsible for representing the interests of their constituents, and this can be fully achieved only if they have access to all information and unencumbered advice from staff on the tangible and financial implications of a project.

Finally, in order to add to the actual and perceived legitimacy of the process of planning large-scale infrastructure projects, oversight responsibilities of auditors general and comptrollers should be expanded. Specifically, a provincial, state, or federal auditor general or comptroller should certify that each summary report released throughout the project planning process clearly and accurately represents the full range of issues contained within the full-

length confidential document. The auditor general or comptroller should also be tasked with examining the contents of all confidential documents, with a mandate to report on whether any assumptions or parts of the proposals could incur harm to all or part of the community in which the project is being delivered. Categories to be examined should be broadly defined to include financial harms, environmental harms, harmful impacts on private property, and harms related to system design and construction. However, this requirement should not allow the auditor general or comptroller's reports to overturn a project after the fact, as large-scale infrastructure projects often ultimately require political decisions about how potential costs and benefits are distributed throughout a community. Instead, the oversight function of the independent auditor general or comptroller should occur throughout the planning process. This is intended to ensure that the public has the information to decide whether to support or oppose the project while decision-making processes are ongoing, rather than waiting for post-approval reviews to reveal troubling information too late to stop or alter a project without tremendous inefficiency.

Such an expanded role for auditors general or comptrollers is particularly important to help the public see through the layers of sophisticated project promotion and public relations that typically surround the planning of contemporary large-scale infrastructure projects. This oversight function becomes even more important when the public is prevented from vetting certain key planning documents themselves.

Overall, the conflict between confidentiality and transparency in DBFO procurements can be resolved satisfactorily. However, doing this requires that infrastructure project planners and private concessionaires adequately justify withholding information from the public, and that a watchdog judges these claims for confidentiality. Such a watchdog must recognize that though some claims are legitimate, the credibility of the entire DBFO process may be undermined if unflattering or negative information is inappropriately shielded from public view. Planners should strive to put systems in place that will preserve the needed transparency.

Notes

1. As is true of any case study, I do not know the results of the Vancouver experience to be generalizable to other contexts or other types of public/private partnerships. However, it is worthy of attention because planners of the Canada Line went to great lengths to implement procedures that balanced transparency and accountability with the need for confidentiality at different stages of the planning process. *Project Finance* magazine identified the Canada Line as the 2005 North

American transport deal of the year (*Project Finance*, 2006). Because the project was internationally recognized as a successful example of a project procured through a DBFO public/private partnership, it raises useful questions about confidentiality in other projects being delivered through similar models.

2. The United States Department of Transportation has an extensive webpage that covers public/private partnerships and provides information on pertinent federal and state level legislation at <http://www.fhwa.dot.gov/ppp/legislation.htm>

3. I describe the delivery of the Canada Line as a DBFO public/private partnership, the politics that surrounded the project, and the potential for the new rail line to meet its forecasted expectations in greater detail in Siemiatycki (2006a, 2006b).

4. Out of 10 possible alternative alignments in RAVCO's (2003) project definition report, only one 12-block stretch was shown to be potentially constructed using an open-pit method known as cut-and-cover, with the remainder of the underground segments built using a tunnel-boring machine. The report also devised a prospective construction schedule based on tunnelling all of the proposed underground segments.

5. At the beginning of the Canada Line planning process, RAVCO appointed Ted Hughes, a highly respected former judge, to provide independent oversight to ensure that the evaluation process was applied consistently and fairly according to the selection guidelines established by RAVCO. Hughes had a reputation for being nonpartisan, and his integrity in conducting the review was never questioned.

6. RAVCO has higher costs when a project is delivered through a public/private partnership than when a traditional public sector procurement model is used due to higher costs to manage activities such as community consultation, and higher property costs.

7. The discount rate is a figure used to calculate the current value of future project expenses and revenues, which must account for inflation and other factors that affect the time value of money. The reduction in the nominal discount rate from 7% used in March 2004 to 6% used in the November 2004 value for money report had the effect of increasing the net present value of costs and revenues identified for both the private sector proposal and the public sector comparator. As a result, there are difficulties pinpointing the sources of the net cost escalations for the project as identified in the November 2004 report, since these were caused by a combination of rising input prices and shifts in the assumptions used to calculate costs and revenues over the lifetime of the project.

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