The Infrastructure Funding Deficit: Time to Act

June 2006

D18-06007

RCCAO Profile

The Residential and Civil Construction Alliance of Ontario (RCCAO) offers the construction industry an opportunity to speak out in a united fashion, with real solutions to our infrastructure challenges.

RCCAO PURPOSE

- To address the major challenges facing the construction industry
- To offer solutions to governments and other stakeholders with one collective voice (management and labour)
- To build on research already done on addressing the Infrastructure Funding Deficit

PRIORITY ISSUES

- Infrastructure & Innovative Financing
- Growth Planning / Land Use Planning
- Regulatory Reform

RCCAO MEMBERS & CONTRIBUTORS:

- Heavy Construction Association of Toronto
- Greater Toronto Sewer and Watermain Contractors Association
- Residential Low-rise Forming Contractors Association of Metro Toronto & Vicinity
- Ontario Concrete and Drain Contractors Association
- Metropolitan Toronto Apartment Builders Assoc.
- Toronto Residential Construction Labour Bureau
- Universal Workers Union, Local 183
- Toronto and Area Road Builders Association
- The Residential Carpentry Contractors Association - RCCA (Contributor)

For more information, visit www.rccao.com

The Infrastructure Funding Deficit: Time To Act

EXECUTIVE SUMMARY

This report was funded by the RCCAO. It updates one prepared for Local 183. The 2004 paper suggested that a solution to Ontario's infrastructure funding deficit lies, in part, in the declared intention by the Province's major public pension funds to invest more of their assets in infrastructure. It recommended innovative financing approaches developed with the pension funds as an important step toward closing the infrastructure gap. This update incorporates the recent initiatives by the Ontario government and greater emphasis in Canada on involving the private sector in the delivery of capital infrastructure.

BACKGROUND

Ontario and its major municipalities face an infrastructure renewal crisis. Years of neglect have left us with broken roads, sewers and watermains, aging hospitals and schools, and tired transit whose cost to fix nation-wide has been estimated at $57 billion, and this could grow to $110 billion by 2027. Major investments in public infrastructure have not been made since the 1950's and 60's and it is estimated that 59% of our infrastructure is now more than 50 years old. On average, we have used up more than 79% of the useful life of the currently available public infrastructure.

The existing public infrastructure needs to be rehabilitated; the cost for this is estimated to be approximately $19 billion in Ontario alone. Furthermore, a limited snapshot of the future requirements for roads, electricity, hospitals and transit has identified an annual need in Ontario for expansion and replacement of this public infrastructure which could be as high as $6 - $7 billion each year. This is in addition to the requirements for sewer and water, education facilities and social housing and the future billions required to protect and maintain these important public assets.

Recognizing the growing infrastructure deficit and its implications, the Ontario Government has taken some important steps in infrastructure investment:

- Established framework for planning, financing and procuring public infrastructure
- Enacted the *Places to Grow Act (Bill 136)* for long-term growth planning and infrastructure renewal across the province

- Released a five year infrastructure investment plan which set priority and targeted more than $30 billion for infrastructure investments by 2010.
- Selected *Alternative Finance and Procurement* models to finance and implement many large infrastructure projects.
- Created a new provincial agency, *Ontario Infrastructure Project Corporation (Infrastructure Ontario)*, to manage the implementation of AFP projects.
- Committed a total of $5,318 million for infrastructure expenditures in the 2006 Budget.

With OMERS and other pension funds having a major shift in its investment policy away from equities and towards infrastructure as an asset class necessary for its long-term pension requirements, a window of opportunity has opened for the introduction of innovative financing approaches to some of Ontario's infrastructure requirements. Yet, many have been frustrated and disappointed by the lack of domestic infrastructure investment opportunities in the past, and have therefore invested in other countries. These recent government initiatives and commitments would hopefully create a strong environment for private infrastructure investment and give positive signals to pension funds who are looking for good investment opportunities with the stable and long term partnerships.

RECOMMENDATIONS

Although user fees of various types partially fund some of Ontario's public infrastructure, the link between cost and use is not well-established in the public's mind. Reinforcing this relationship could lead to conservation measures and would also make it much easier to create stable funding vehicles that do not depend solely on general tax revenues. In order to encourage funding vehicles that use private or non-government funds such as OMERS and Teachers pension funds to invest in Ontario, the recent initiatives should be continued. The government should also create a stable investment environment through political commitment (but not interference), consistency, a regular and predictable flow of deals, and suitable framing legislation.

To be successful, non-government participation in public projects could also involve an operations/maintenance phase. This ensures life cycle costing and the establishment of true user costs. A reasonable transfer of risk to the public sector should be a minimum government requirement of any partnership with the private sector. Third party performance audits are also required for successful partnering. User fees should be considered and a strong public communications program developed to support the process. The standardization of risk allocation models,

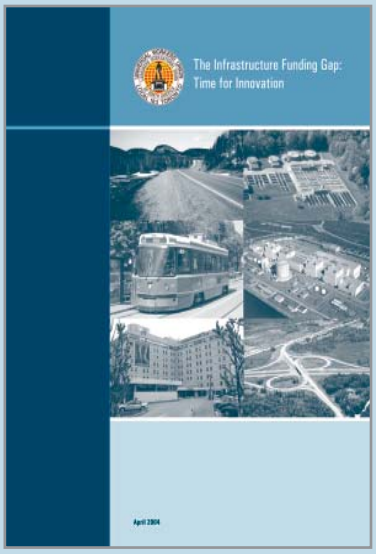
tendering processes, bidding processes, contract and evaluation would significantly reduce bidding costs. The well-established link between investment in public infrastructure and economic competitiveness means Ontario must act now if it is to avoid a widening infrastructure gap. The certainty that Ontario's pension funds will continue to invest in infrastructure projects in other jurisdictions if opportunities are not forthcoming in Ontario, adds urgency to this situation.

TABLE OF CONTENTS

The Infrastructure Funding Deficit: Time to Act

FOREWORD

In April, 2004, a discussion paper "The Infrastructure Funding Gap: Time for Innovation" was written in response in part to the Ontario Government discussion paper on Infrastructure Financing and Procurement, *Building a Better Tomorrow*. The April, 2004 paper highlighted some of Local 183's concerns about Ontario's infrastructure gap and offered a basis for solutions reflecting our collective views and understanding of the issues that have resulted in the current problem.



"The Infrastructure Funding Gap: Time for Innovation"

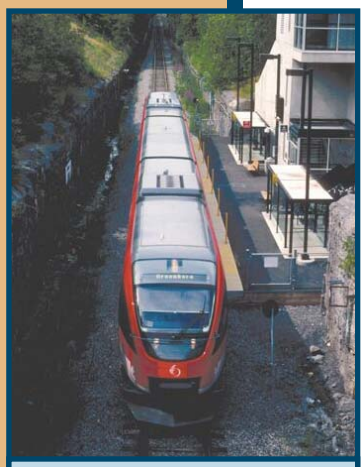
That problem, simply put, is that Canada, Ontario and many municipalities face an infrastructure renewal crisis. Years of neglect have left us with broken roads, aging hospitals and schools, and tired transit.

The principal recommendation was that the Ontario Government must consider innovative approaches to supplement its extensive public infrastructure funding requirements. We also believe, however, that innovative financing is not just about delivering services at a lower cost, but that it should be viewed as a method of levering current limited financial resources, in concert with income from new sources, to take advantage of funding potentially available from organizations such as the public sector pension funds.

This report was funded by RCCAO. It reviews some of the earlier comments and suggestions and incorporates some of the very significant actions taken by the provincial government to address the issue. These are:

- *Building a Better Tomorrow*: Established framework for planning, financing and procuring public infrastructure.
- Enacted the *Places to Grow Act (Bill 136)* for long-term growth planning and infrastructure renewal across the province.
- *ReNew Ontario*: Released a five year infrastructure investment plan which set priorities and targeted more than $30 million for infrastructure investments by 2010.

- Selected *Alternative Finance and Procurement* models to finance and implement many large infrastructure projects
- Created a new provincial agency, *Ontario Infrastructure Project Corporation (Infrastructure Ontario)*, to manage the implementation of AFP projects.
- *2006 Budget*: Committed a total of $5,318 million for infrastructure expenditures in the 2006-2007 plan



Ottawa LRT

It is important to understand, and we have tried to explain throughout the paper, that innovative approaches to delivering public infrastructure are well-established internationally and refer to an extensive range of delivery models. In most instances, these do not imply the sale of a public asset or the long-term lease of publicly owned infrastructure to the private sector, but involve relationships with varying degrees of continued public involvement.

THE EXTENT OF THE PROBLEM

A number of organizations have attempted to delineate the extent of Canada's infrastructure deficit, with limited success; but taken together their efforts underscore the pressing need to address the following:

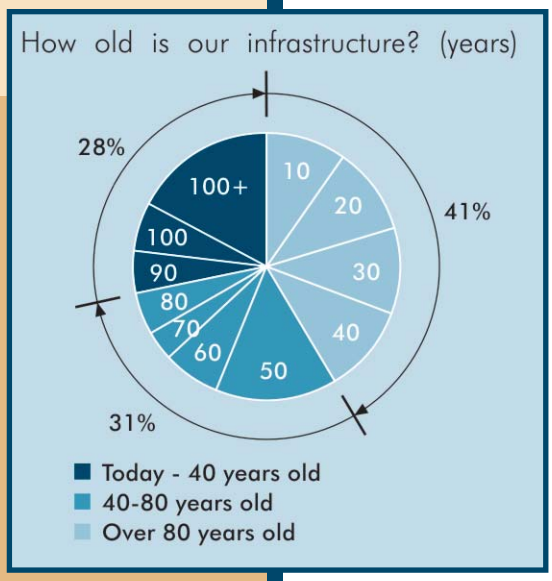
- a detailed inventory of both the extent and condition of public infrastructure in Ontario and in Canada which is tracked on a yearly basis in order to measure the amount of progress, if any, on reducing the infrastructure deficit; as it is not possible to develop a strong direction if there is no true understanding of the scope of the problem; and
- new funding models to supplement existing funding as existing funding techniques can no longer be relied upon to fully fund both the rehabilitation of existing public infrastructure and the expansion required to accommodate growth.

The inventory value of public assets has been estimated by a number of groups. For example, the Federation of Canadian Municipalities (FCM) estimates the replacement value for Canada at $1,700 billion; an estimate which compares well with the National Research Council's (NRC) estimate of approximately $1,900 billion. If these estimates are correct, the total value of Ontario's public infrastructure could be as high as $690 billion.[1] This estimate is considerably higher than the $240 billion estimated in the Infrastructure Financing and Procurement Discussion Paper.

1 Based on population

Although some of this difference is obviously definitional, these significantly varying estimates underscore the fact that not enough is known about the value of our infrastructure and even less is known about the condition of this public asset.

FCM (2002) also quotes some further significant statistics:



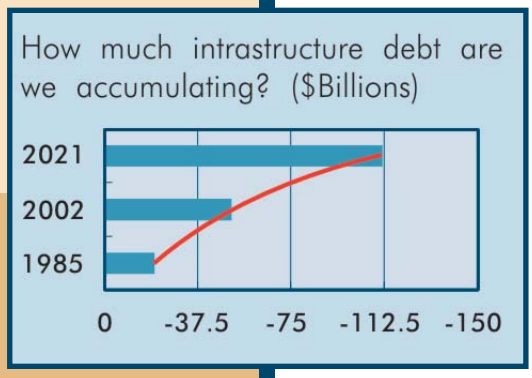
- Major investments in public infrastructure occurred in the 1950's and 1960's; consequently, 59% of Ontario's infrastructure is now more than 50 years old (28% is more than 90 years old).
- On average, we have used up more than 79% of the useful life of the currently available public infrastructure.
- The cost to repair the existing national public infrastructure is estimated at $57 billion. If nothing were done, this would increase by inflation alone to $110 billion by 2021.[2]
- Assuming a useful life of 50 years, it is reasonable to assume that replacement and repair of existing public infrastructure will require an annual re-investment of 2% of its value.
- For Ontario, this means that the cost for rehabilitation and maintenance of the existing public infrastructure could be in the order of $5-$10 billion per year. This is in addition to the current repair deficit, which could be as high as $19 billion, and the requirements for infrastructure expansion.

The following estimates of short- to mid-term requirements for infrastructure investment have been identified from various sources:

1. Ontario's Ministry of Transportation in its 2002-03 business plan estimates a need for $1 billion in each of the next 10 years for highway maintenance and expansion: **$10 billion over 10 years**
2. All of Ontario's generating capacity (except hydro power) will need to be replaced over the next 25 years. Recent announcement by OPG puts this value, including expansion of generating capacity and transmission lines, at: **$40 billion over 25 years**
3. The hospital program will require an investment over the next 3-5 years of $7-10 billion: **$10 billion over 5 years**
4. The Canadian Urban Transit Association's recent report estimates the transit need for Ontario at $10.4 billion over the next 5 years. Approximately 52%

2 Developed by FCM from a 1996 study by McGill University and FMC "Report on the State of Municipal Infrastructure in Canada"

of this is for repair and rehabilitation, while the remainder is for expansion: **$10 billion over five years**



This list, which averages about $6.5 - $7.0 billion per year, is far from complete and does not include the need for sewer and water, education facilities, social housing and many of the municipal infrastructure requirements. This is not to say that these are not important and perhaps they should be added to the list; however, the focus of this paper is on possible solutions, leaving a more complete accounting of the infrastructure funding deficit to a later date.

In July 2005, the Water Strategy Expert Panel's report, "Watertight: The Case for Change in Ontario's Water and Wastewater Sector," was released. The report indicated that the investment needs for water and wastewater systems will be $30 billion to $40 billion over the next 15 years.

While the infrastructure gap estimates vary on the size of the problem, there is a clear consensus that Ontario has a significant infrastructure deficit in the order of $100 billion and this deficit is growing every year. Thus, this paper will focus on the "going forward" messages rather than updating or verifying the extent of the gap.

HOW HAS THIS INFRASTRUCTURE GAP ARISEN?

Governments for years have not invested sufficiently in new or renewed infrastructure. In many cases they have deferred maintenance of existing infrastructure or provided inadequate maintenance. This neglect is due in part to the high profile demands for increased spending on social programs (health services and education, for instance), which have taken precedence over infrastructure spending. Infrastructure's low and unglamorous profile makes it easy to ignore.

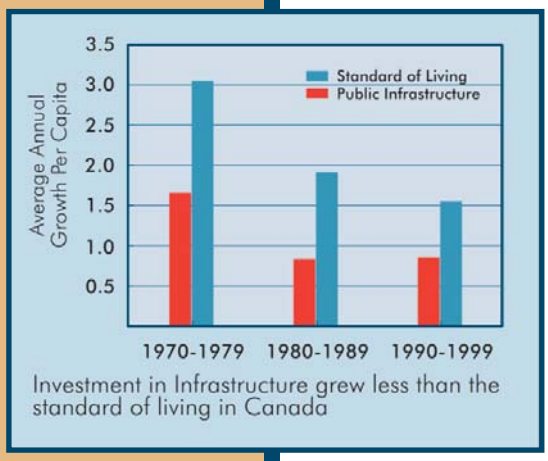
It is patently clear that renewal and expansion of public infrastructure cannot be funded as it has been in the past. Indeed, as will be demonstrated later, many other jurisdictions have already come to this realization. To date public infrastructure is essentially provided at a cost that is significantly lower than the true life-cycle cost. Although user fees of various types partially fund some of the public infrastructure, the link between cost and use is not well-established in the public's mind. In our view, if this relationship were reinforced, it could lead to conservation measures and would also make it much easier to create stable funding vehicles that do not depend solely on general tax revenues.

Ontario has taken some important steps:

- Bill 175 ("Sustainable Water and Sewage Systems Act 2002") recognizes that user fees should reflect the true cost of providing the service and points to a window where new and innovative approaches to funding public infrastructure should be considered.
- Hydro rates increased in May, 2006 by 15%, recognizing that prices which consumers are now paying are lower than what the province pays to buy electricity on the open market, and that the rates have not covered costs over the past year. This will more fairly reflect the true cost.

We raise these issues not because we recommend that user fees should fully pay for all public infrastructure as this is not always possible (e.g. the TTC in Toronto, where the fare box cannot be expected to fully pay for operating, maintaining and expanding the service). Direct user fees (such as water and sewer or hydro charges, which fully reflect the life cycle cost) are, however, one way of "forced" conservation and of requiring those who use the infrastructure to pay for all or part of it. Other services may need to be subsidized from more general but dedicated charges (such as gasoline taxes to help pay for transit costs). For instance, the Ontario government is dedicating part of the existing provincial gasoline tax to public transit, which could provide more than $1.4 billion over five years to 83 municipal transit systems in 110 communities.

The challenge is to create a vehicle, which uses private or other non-government funds, and which can supplement more traditional funding sources. At the same time, it should avoid the pitfalls (both real and perceived) associated with involving the private sector in the provision of what have traditionally been government delivered services.



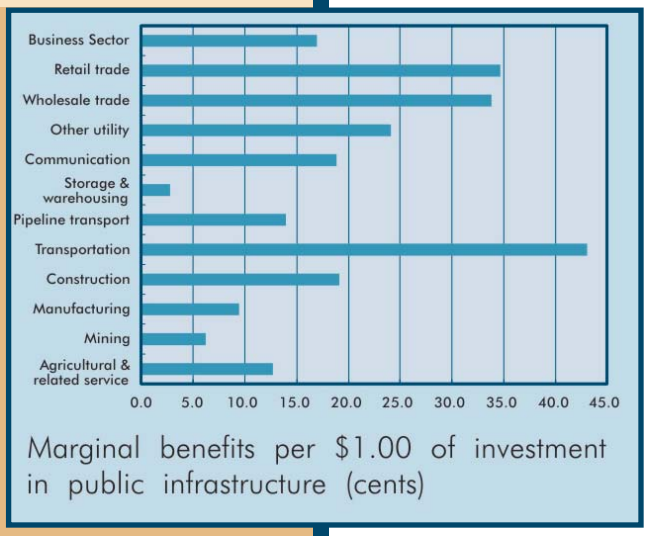
Investment in Infrastructure grew less than the standard of living in Canada

WHY IS IT IMPORTANT TO ACT NOW?

There is urgency to resolving the current funding impasse, as there is a direct economic link between investment in public infrastructure and the economy as a whole. Lack of investment in public infrastructure will affect both quality of life and the competitiveness of this province. Statistics Canada reviewed this relationship for Canada and concluded that public infrastructure capital formation is needed for a strong, flexible and vibrant economy. Workers need to ride the subway or drive their cars to get to work; companies

need to ship goods efficiently; manufacturers need to use water and require waste water disposal facilities; etc.

Yet, as reported by Statistics Canada, over the past three decades the ratio of public infrastructure capital formation has slipped in Canada in comparison to the overall tangible produced capital stock (residential and non-residential structures and machinery, etc.). This report indicates the following trends:



- The total value of public sector capital investment (as a ratio to total public and private capital), dropped from a high of 36% in 1961 to only 23% in 2002.
- Business sector capital stock, which excludes residential and institutional buildings but includes non-residential building, machinery equipment, etc. remained a constant percentage of total capital stock indicating that economic activity is placing increasing demands on public infrastructure which is growing less rapidly.
- This 40-year decline is largely attributable to the federal and provincial sectors, as the share of municipal public infrastructure has increased from 30.9% in 1961 to 52.4% of total stock of public infrastructure in 2002. This asset transfer has significantly increased the pressures on the municipal tax base.

The reduction in investment in public infrastructure and the general inability of the public sector to keep pace with growth in business infrastructure has resulted in the following:

- On a per capita basis, the discounted value of public infrastructure grew at an average annual real rate of 1.1% over the 1971-2000 period;
- However, most of this growth occurred in the 1970's, when real growth was in the order of 1.7% per annum;
- In the 1980's and 1990's it grew at a real rate of 0.85% and 0.87% per annum respectively; and
- Although Canada's standard of living followed a similar trend with rapid increases in the 1970's, it grew at a much greater real rate (2% from 1971-2000; 3.02% in the 70's, 1.9% in the 80's and 1.5% in the 90's) than increases in the public infrastructure stock.

The economic benefits associated with investment in infrastructure capital are extensive. There are also very significant economic costs if infrastructure assets are allowed to deteriorate. For example, investment in roads will result in reduced times to bring goods to market, with the opposite result if there is major congestion. (In documentation prepared for the original Hwy 407 bid, Ontario's Ministry of Transportation estimated that traffic congestion in the GTA cost over $1 billion annually). Statistics Canada argues that, for the Canadian business sector in general, a $1.00 investment in public sector capital stock generates an annual saving of 17 cents in produce cost savings (six-year payback). This annual saving varies by industry and appears to be as high as 42 cents for the transportation sector.

As another indication of the importance of quality public infrastructure, a study undertaken for the Detroit Windsor crossing references a 1995 study by the US Department of Federal Highway Administration, which indicates that, for trucking operations, the cost of delay is in the order of US $2.62 to US $3.49 per minute (per truck).

The worldwide move towards non-traditional project finance recognizes this economic link results from economic and social pressures to reinvest in infrastructure at a time of limited government resources. This is coupled with the perception that these public resources can be better employed in the delivery of services where direct private involvement is either more costly or not desirable for public policy reasons. Canada and Ontario are no different from other jurisdictions in this respect.

RECENT ONTARIO GOVERNMENT INITIATIVES

We are very pleased that the Ontario government has recognized that new delivery models are required to close the gap. Over the last few years, Ontario has made impressive moves in the right direction with its new investment strategies and initiatives to encourage investment in public infrastructure, including the *Building a Better Tomorrow* framework for planning, financing and procuring public infrastructure; the *Places to Grow Act (Bill 136)* for long-term growth and infrastructure renewal planning across the province; project priority through *ReNew Ontario*; the expertise by *Infrastructure Ontario* to manage the implementation of AFP projects; as well as the commitment in infrastructure expenditures in the 2006 budget.

· Building A Better Tomorrow

In 2004, the Ontario government established the framework for planning, financing and procuring public infrastructure. The framework will manage the process of planning, procuring, building and maintaining public infrastructure, to ensure we get

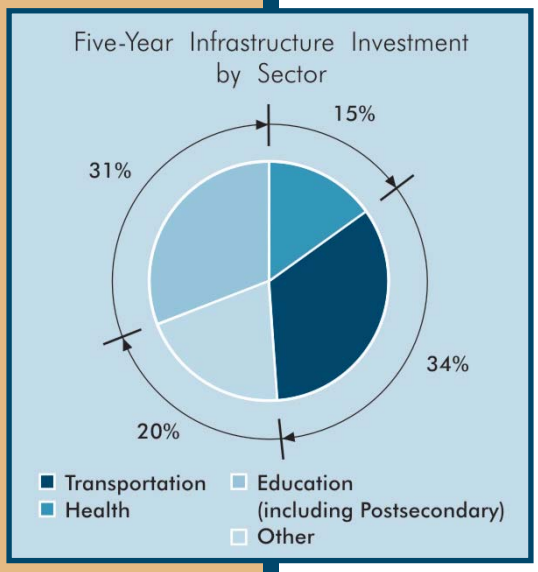
the best value for public investments and proper life-cycle maintenance for public assets. This framework will also help the government and the broader public sector assess proposals for new infrastructure, select the best way to finance projects, ensure construction is completed on-time and on-budget, and maintain public assets properly.

· Places to Grow

In support of the framework, Ontario passed legislation that provides a better way to plan for the massive growth that is coming to the province over the next 25 years. The proposed growth plan enables the government to designate growth plan areas across Ontario to help curb urban sprawl, strengthen communities and protect the natural environment. Identifying where and how growth should occur will support improved global competitiveness, sustain the natural environment and provide clarity for the purpose of determining priority of infrastructure investments.

· ReNew Ontario

In 2005, the Ontario government released a five year strategic infrastructure investment plan that will co-ordinate contributions from all levels of government, the private sector and public agencies like hospital boards and universities to generate more than $30 billion for investment in public infrastructure by 2010. ReNew Ontario directs infrastructure investments to the most important priorities for people — healthcare, education and economic success — and creates new connections between planning, funding and investment priorities. It sets priorities for critical infrastructure investments and shows how the government will work with partners to find new sources of investment.



Through ReNew Ontario, the government and its partners will commit $5 billion to modernize Ontario's health care facilities; more than $10 billion to improve schools, universities and colleges; and more than $11 billion for highways, public transit systems and border and other infrastructure.

· 2006 Budget

In recognition of the need to invest in infrastructure, the government has committed a total of $5,318 million of infrastructure expenditures in the 2006-2007 plan in the 2006 Budget, including:

- $2,416 million in transportation

- $509 million in healthcare
- $1,150 million in education
- $236 million in water/environment
- $383 million in municipal and local infrastructure
- $117 million in justice
- $507 million in other

HOW WILL THE GOVERNMENT IMPLEMENT THE NEW INVESTMENT STRATEGIES?

Bruce Nuclear Power Plant

The Ontario government recognizes that it simply does not have the resources required to finance and build large public infrastructure, such as hospitals and courthouses, as quickly and readily as everyone would like. As such, alternative delivery models are required.

After considering various financing and procurement options, the government determined that Alternative Financing and Procurement (AFP) will allow Ontario to finance and implement many large infrastructure projects better and sooner, without tying up public funds that can be used for other purposes. This means the construction work will be financed and carried out by the private sector, which will assume the financial risks of ensuring that the project is finished on-time and on-budget. The completed facility will be publicly owned, publicly controlled and publicly accountable.

AFP models are selected for given projects on the basis of an assessment against the principles articulated in *Building a Better Tomorrow* framework for planning, financing and procuring public infrastructure. The government has also made it clear that it is committed to keeping core public services such as public hospitals, schools and water and sewage treatment facilities, will remain under public ownership and control.

To implement and ensure the proper deployment of the new infrastructure investment strategies, the government has formally created the Ontario Infrastructure Project Corporation (OIPC or Infrastructure Ontario) in November, 2005. This new arms-length provincial agency will manage the implementation of complex AFP projects. This agency is similar to the Partnerships UK established in 2000 whose mandate is to support and accelerate the delivery of infrastructure renewal, high quality public services and the efficient use of public assets through better and stronger partnerships between the public and private sectors.

According to Mr. David Livingston, President and CEO of Infrastructure Ontario, the government was motivated by three major factors when it formed Infrastructure Ontario in 2005:

- The number and complexity of infrastructure projects that it wanted to develop over a relatively short time frame, with the involvement of a variety of ministries (e.g. health, justice, transportation, etc.). The agency was set up to improve the government's record of an on-time, on-budget delivery of major complex projects.
- Freedom to operate. The agency is not encumbered by normal government processes. This agency is a private company with a single public shareholder and is not subject to regular government procurement policy and employees are not public servants.
- Better aligned to engage the private sector. The agency is expected to be able to mobilize private sector capital and expertise in infrastructure investments.

Infrastructure Ontario would be the Province's key investment tool to address the public infrastructure deficit. Infrastructure Ontario will be an independent agency reporting to the Minister of Public Infrastructure Renewal. Its mandate will be to provide expertise and implement best business practices for all areas of infrastructure planning, financing, construction and management, with a focus on Alternative Financing and Procurement (AFP) projects. The new agency's work will contribute to the implementation plan for the government's *Building a Better Tomorrow* framework for infrastructure planning, financing and procurement. The responsibility of the Ontario Strategic Infrastructure Financing Authority (OSIFA) which provides loans for municipal infrastructure projects was also given to Infrastructure Ontario.

Infrastructure Ontario is responsible for ensuring that public infrastructure projects are delivered on-time and on-budget using private-sector expertise in financing and project management. It is expected to improve procurement processes through addressing construction capacity, bundling projects and advisors, developing standardized documentation and engaging financial advisors early in the process.

It is our understanding that Infrastructure Ontario will be predominantly focusing in the next few years on hospital project and a few other projects. Although there are significant funding allocated to other sectors such as education and transportation, the Government does not have any specific programs or timelines for proceeding with these initiatives as yet.

HISTORY OF PUBLIC/PRIVATE INITIATIVES IN ONTARIO AND CANADA

Although the Ontario government has taken the important and necessary steps, it should be recognized that in the past, Public/Private initiatives have been used on only a few projects in Ontario and Canada and with qualified success. There have been contract cancellations (Pearson Airport and Airside privatization); terms of reference redrafting in the middle of the competitive selection process (Hwy 407); drawn-out reviews and evaluations ending in bidders' revolts (the Niagara Gateway project); and the politicization of projects (OPG and rate caps, Hwy 407 and toll controls, Fredericton-Moncton Highway and toll removals, uncertainty around hospital projects when government changed). We have seen private water initiatives peter out in York and Halton Regions and an interminable process to create an innovative public/private vehicle to develop and manage a system for the treatment of wastes now pouring into Halifax Harbour.

Royal Ottawa Hospital

There had been no institutional framework to guide this type of development and this both accounts for and contributes in part to the mixed experiences in Canada. Projects have been stalled or cancelled because of conflict with public sector unions and/or a lack of commitment to the process by the public sector bureaucracy.

Creating a framework is essential in allowing the inclusion of the private sector in this process. More importantly, this would also help convince the public that private involvement or other forms of non-traditional funding or delivery are appropriate. This is especially important when the public is not aware of the real cost of the infrastructure – a perception that needs to change.

There have been attempts in Canada to involve the private sector in the creation of public infrastructure; but not with the commitment, the consistency, or the legislative protection (including for instance, provision for honoraria and protection of intellectual copyright) that would encourage and protect private sector investment and encourage long-term partnerships.

The consequences of government failing to work with private interests include increasing foreign investment in our few privatization initiatives due to lack of local experience and/or resources (again, see Hwy 407, with significant investment by Spanish firms, and now by Australian); potential capital flight and loss of local investment to offshore projects, which occurred after the Pearson privatization cancellation in 1992. Increasing foreign participation in these domestic projects occurs because there have not been enough of them to seed local firms through experience on local projects. Where this has happened, in the case of Marshall

Macklin Monaghan (Terminal 3) and Canadian Highways International Corporation (Hwy 407), for instance, these firms have shown they are able to compete successfully offshore: MMM in international airport development and funding partnerships in Budapest, Hungary and Quito, Ecuador; CHIC on the Cross-Israel Highway, for instance.

Since the earlier version of this report, there are major strides in using innovative financing in infrastructure investment. Recent major projects in Canada include Anthony Henday Drive in Alberta; Sea-to-Sky Highway, Sierra Yoyo Desan Road, Kicking Horse Canyon, Abbotsford Hospital, and Academic Ambulatory Care Centre in BC; William Osler Health Centre and Royal Ottawa Hospital in Ontario.

William Osler Hospital

Canadian teams competing on international projects are up against large European firms whose governments have for years provided local public/private partnership opportunities that have enabled these firms to grow and develop global leadership positions in airports (Hochtief of Germany, Aéroports de Paris of France), toll roads (Dragados and Ferrovial of Spain) and hospitals (Carillion of the UK).

Other countries have more extensive experience which has helped develop a strong industry. For example:

- The United Kingdom's Private Finance Initiative (PFI) is a vehicle that can be used to apply private funding to public projects. The rules where this form of financing applies are well-established and understood by the public in general and by the various ministries;
- The State of Victoria in Australia has established detailed and standardized procedures to encourage private sector involvement through Partnerships Victoria; and
- South American countries, such as Colombia, Chile and Ecuador, have passed legislation similar to Australia's to standardize the process and protect bidders.

Clearly, other governments have managed to establish mechanisms and controls that allow the involvement of the private sector in the provision of some public infrastructure. Control and public benefit is secured through legislation and a strict method of measuring the benefits of the non-traditional approach against more traditional ways of funding public infrastructure.

This is not to say that we recommend that public/private partnerships or non-traditional fundings should become the main delivery vehicle for public infrastructure

in Ontario. But there must be a role for non-traditional approaches which can assist in financing public infrastructure.

WHAT DO PENSION FUNDS THINK ABOUT INFRASTRUCTURE INVESTMENT IN ONTARIO?

While major investments of over $100 billion are necessary to close the infrastructure deficit gap, significant institutional funds appear to be available for the right type of projects if the investment process is understood and standardized.

In 2003, OMERS, one of Canada's largest public sector pension funds, announced a major shift in its investment policy away from equities and towards infrastructure as an asset class necessary for its long-term pension requirements. Subsequently, other public pension funds have made similar changes in their investment policies.

Canada's pension funds represent a vast and growing pool of finance looking for long term investment opportunities presented by infrastructure projects. These investments are long duration assets that are expected to produce stable returns in excess of those obtained in the fixed income markets. The stable returns provided by infrastructure investments also tend to tie to inflation and act as a hedge against the cost of paying inflation-projected pensions to pensioners. In recent years, many pension funds have allocated or are planning to allocate a significant proportion of their investment to infrastructure. Below are some of the major pension funds making significant commitments on infrastructure investments.

	Actual or Target Allocation
Ontario Municipal Employees Retirement System (OMERS)	15%
Caisse de depot et placement du Quebec (CDP)	4%
Ontario Teachers' Pension Plan (OTPP)	9%
Canada Pension Plan Investment Board (CPPIB)	10%
Ontario Public Service Employees Union Pension Trust (OPSEU)	15%

Utilizing these funds would ensure that the significant pension fund assets created by Ontario residents are reinvested in the province to help strengthen its economy and create new job opportunities.

The window for accessing these public sector funds is, however, relatively narrow as the pension funds' requirements for diversification must be met. In fact, many pension funds have been frustrated and disappointed by the lack of such domestic opportunities in Ontario that meet their investment criteria, and therefore are looking

for opportunities in other countries. Examples of recent major investment overseas by Canadian pension funds include:

- CPPIB:
  - € 200 M for Macquarie Europe Infrastructure
  - + € 66 M co-investment in Wales West gas distribution
- OTPP:
  - € 259 M Northumbria Water Group
  - US$ 1.75 Bn InterGen (power plants in U.K, Netherlands, Mexico, Philippines).
- OTPP & OMERS:
  - Cdn$ 555 M each Scotia Gas Networks (gas distribution in Scotland & England)
- CDP:
  - Cdn$ 362 M Southern Star Gas Pipeline (natural gas distribution SW US)
  - Cdn$ 200 M for 40% Hochtief Airport Capital (airports in Athens, Dusseldorf, Hamburg & Sydney)
  - Cdn$ 983 M Astoria Energy (NYC electricity generator)

Since opportunities to invest in public infrastructure did not exist in Canada, these funds have sought to invest outside of Canada to meet their future pension obligations. These pension funds are generally looking for good investment opportunities in jurisdictions that have a sophisticated and transparent regulatory framework, thus creating a strong environment for private investment. Some good projects offering an appropriate risk-adjusted return for investors and signals from governments that they are ready to commit the sort of stable, long term public-private partnerships, are essential in attracting Canadian and local pension funds to invest in infrastructure projects in Canada.

Highway 7 through Newcastle

It is also not realistic to expect that these funds will consider serious investment in this country until there is a higher degree of public acceptance and a supportive policy and a legislative framework similar to that which exists in other jurisdictions. Innovative financing has been embraced by many other jurisdictions as the preferred alternative to deliver certain large public infrastructure projects. Therefore, it is most unfortunate when the head of CUPE says that we should be "wary of the P3

model, which is risky, politically unaccountable and more expensive than a purely public investment model."

Government must provide leadership on innovative financing as the private sector cannot credibly promote these ideas due to their perceived vested interests. Everywhere innovative financing has been successfully applied, it was spearheaded by the government, with the private sector participating only after the "rules of engagement" were clarified.

IMPORTANT PREREQUISITES

Meaningful involvement by the private sector is, however, not automatic; from the experience of other countries and Canada, the following are noted as important prerequisites for such financing:

- **Political commitment**: Political commitment enshrined at the policy level is important for the private sector, because unless there is a stable investment environment and continuing business opportunities, firms will be reluctant to develop the necessary resources required to bid for contacts.
- **Enabling legislation:** Non-traditionally funded projects often need to be supported by enabling legislation that is firmly embedded in the legal structure. Key aspects of this include: the existence of a concession law that can be readily applied; the removal of tax anomalies; and refining of public expenditure capital controls to accommodate non-traditional financing.
- **Evaluation Framework:** A review/evaluation framework, within which all significant public infrastructure projects are assessed, should be used to determine if non-traditional delivery mechanisms are appropriate.
- **Expertise:** Both the public and private sectors must have the necessary expertise to deal with process. The public sector procurer, for example, needs to be able to negotiate individual project contracts and to access the appropriate financial, legal and technical expertise.
- **Project prioritization:** The government needs to identify those sectors and projects that should take priority and are amenable to a non-traditional process. A review of the commercial deliverability of the scheme, prior to the commencement of the procurement process, can be a source of comfort to the private sector. It helps to reduce the incidence of unsuccessful competitions and avoid the associated bidding costs that would otherwise be incurred.
- **Shared Risk:** An essential tenet of the public/private partnering process is that there should be a transfer of risk to the private sector partner. The risk

should, however, be carefully defined and limited to risk over which they have control.

- **Deal flow and standardization:** A regular and predictable flow of deals, based on recognized risk allocation templates, nurtures the development of a successful and strong program. Guidance on contract structure also helps to keep costs down.

CHALLENGES FOR ONTARIO

The consistency in the implementation of AFP would reduce bidding costs for Ontario infrastructure partnership. The more the risk allocation models, tendering processes, bidding processes, contract and evaluation can be standardized, the less is the need for the government and private partners to negotiate the risk, and the more costs both parties can save.

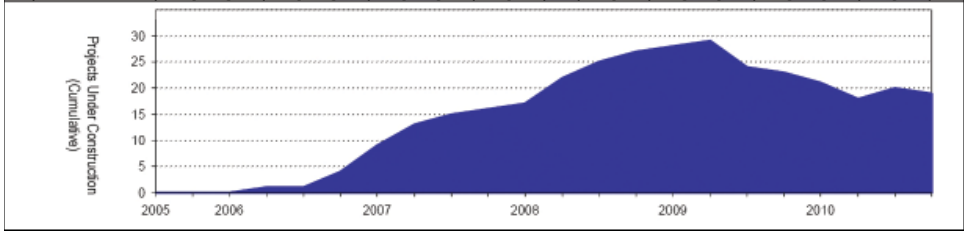
On the other hand, a regular and predictable flow of deals – a pipeline of projects going to market – can give forewarning to the market of current and future projects and indicate the sectors in which new business opportunities are likely to arise. It can also send a positive signal that the government is committed to AFP projects. Improved communications on upcoming projects would help build a strong market for infrastructure investment. This would also allow bidders to more effectively plan and allocate the human and capital resources for these potential opportunities. Governments will also benefit from a more competitive market, with improved value for money in project delivery.

Since 2005, the Ontario government has announced 30+ AFP projects. The immediate focus is on hospitals with the vast majority of these announced AFP projects in the healthcare sector. The intention is to allow private construction players to bulk up to cope with the future deal stream. Infrastructure Ontario hopes to give investors the confidence to invest with the transparency offered by a pipeline of projects.

The following figures illustrate construction activity over the next few years on infrastructures projects announced thus far in Ontario. The chart indicates that construction activity is going to peak at 2009 Q3, and will level off after that.

Construction Activity by Quarter

		2005		2006				2007				2008				2009				2010				
		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Build Finance	RFP Issue		1		3	3	2	2	1	2	2	3	2	1	1									23
	Construction Start				1		2	4	1	3	1	1	3	3	2	1	1							23
DBFM	RFP Issue			2			1		1		1		1	1		2	1	2	1					13
	Construction Start						1	1	1				2				1	1		2	1	2	1	13



Source: Infrastructure Ontario

However, the availability of labour could be a potential issue in view of the significant number of infrastructure projects in British Columbia which would need to be completed over the next few years, in addition to other infrastructure projects in Alberta and Quebec. It must be recognized that there is only a very limited number of sophisticated contractors in North America who are capable of dealing with large infrastructure projects. Thus, the government has to help to ensure that construction capacity exists nationally.

Kingston General Hospital

OUR RECOMMENDATIONS FOR ONTARIO

As noted, many of the public pension funds in Canada have invested to help finance public infrastructure needs elsewhere in the world, in view of the lack of such opportunities that meet their investment criteria in Ontario. Opportunity still exists to capture some very significant funding sources available from the public sector pension funds in an innovative way to offset a portion of Ontario's public infrastructure deficit. These pension funds have fiduciary responsibilities to their plan members, however. Our recommendations are therefore:

1. **Recent initiatives should be continued.**

   Over the last two years, the Ontario government has made some impressive moves in the right direction towards innovative financing. The Ontario government should keep up with the recent initiatives and continue to consult with potential investors to facilitate private sector involvement in public infrastructure.

2. **The climate of uncertainty surrounding the relationship between the government, the public sector unions and potential infrastructure delivery partners should be avoided.**

Correct or not, the perception by certain politicians, and the civil service in general is that the ability of the private sector to deliver public services is highly over-rated. The perception is that private sector borrowing costs are higher. This is obviously so but, as noted in the UK experience, the total cost is not necessarily higher if the impacts of schedule and cost over-runs are included. In fact, if the government had invested the appropriate amounts in public infrastructure maintenance and expansion it is quite possible that the associated budget deficit would have increased provincial borrowing costs making this difference significantly less.

Darlington Nuclear Power Plant

It is perceived that because of the profit motive the private sector cannot deliver quality services at a reasonable cost. Deals must, therefore, be transparent to ensure the public is aware that quality services can be delivered by private sector at a reasonable cost. It is very important that arrangements with the private sector are fair and seen to be fair. Selection must be by means of a competitive and open process. A process for comparing the cost fairly to continued public sector delivery must be established and accepted by the public in general, but also by the public sector unions.

These issues have been addressed successfully in many other jurisdictions and innovative financing schemes have become one important tool for upgrading and expanding quality public infrastructure.

3. **Uncertainty arising from the current EA process should also be resolved.**

Current process for infrastructure investment by government involves lengthy EA process. The industry and some jurisdictions consider the EA process to be too long, uncertain, costly and convoluted. This creates uncertainty for potential investors and contractors who are trying to more effectively plan and allocate the human and capital resources for these potential opportunities. As such, we support the government's initiatives to streamline the EA process in order to remove the uncertainty around the pipeline of projects.

4. **Innovative financing must be strongly supported by policy or legislation.**

This is a prerequisite and, for example, the use of innovative forms of funding is supported by legislation in some jurisdictions (e.g. Japan, Ireland, France, Chile) or by a strong policy position (UK and Australia).

5. **A stable and consistent policy environment must be created.**

A consistent approach and policy is essential in creating a stable environment for private investors. It is unlikely that pension funds, given their fiduciary responsibilities, will consider increasing their public infrastructure investment in Ontario and Canada in a meaningful way until there is some stability in the market place.

These pension funds are generally looking for good investment opportunities in jurisdictions that have a sophisticated and transparent regulatory framework, thus creating a strong environment for private environment. Signals from governments that they are ready to commit the sort of stable, long term public-private partnerships, are essential in attracting pension funds to invest in infrastructure projects in Canada.

6. The level of standardization must be increased.

Consistency and standardization is the critical success factor in delivering the AFP projects. The standardization of risk allocation models, tendering processes, bidding processes, contract and evaluation would significantly reduce bidding costs.

7. A regular and predictable flow of deals should be available and communicated to private investors.

A pipeline of projects going to market can give forewarning to the market of future projects and indicating the sectors in which new business opportunities are likely to arise. It can also send a positive signal that the government is committed to AFP projects. Improved communications on upcoming projects would help build a strong market for infrastructure investment. This would create certainty for hospitals that can proceed with fund raisings. This would also create certainty for the construction industry and allow bidders to more effectively plan and allocate the human and capital resources for these potential opportunities. Governments will also benefit from a more competitive market, with improved value for money in project delivery. The anticipated AFP construction activity schedule would certainly help in this regard.

NTTP Wastewater Plant

The government should also continue to work closely with and consult with the industry to get practical feedback, and ensure the industry has the capacity to handle the AFP projects across North America.

8. User fees or charges should be considered.

Innovative financing is well adapted to the application of user fees and/or tolls. As these fees would be applied to financing costs, ongoing operations

and maintenance, contractual arrangements which limit cost increases are much easier to achieve. This is not the case if there is a sale of the asset such as the Highway 407 privatization. Notwithstanding that the actual construction of Highway 407 itself was considered a stupendous success (on-time and on-budget), its subsequent sale resulted in a very negative public perception. This should not be confused with the broader success of the project itself.

The Sustainable Water and Sewage Systems legislation recognizes that user fees should reflect the true cost of providing the service and points to a window where new and innovative approaches to funding public infrastructure should be considered.

Highway 9

To protect the public, mechanisms should be considered that cap the maximum profit that can be earned by equity investors (as in the regulated rate-of-return of utilities). For example, returns on equity could be limited to a set amount with higher returns shared with the government (perhaps to be reinvested in other public services). This "cap" would tend to limit the incentive to raise user fees. Many "tools" of this type which protect the public interest are an internationally accepted component of these types of projects.

9. Innovative financing must not be seen as a way of shedding public sector jobs.

Although an innovative financing scheme implies a long-term contractual relationship, its principal intent should not be seen as the elimination of public sector jobs. If staff position transfers are involved, the appropriate job and benefit protection and guarantees must be reflected in any contract.

This is a particularly sensitive issue for public sector pension funds as they cannot realistically be involved in projects resulting in job losses for their members.

10. Public education is essential.

It is essential to convey to the public that this approach is considered because it is not possible to continue funding all public infrastructure from traditional sources.

Public education should address the following:

- Innovative financing will only be used where appropriate, and where proper controls and evaluation procedures can be enforced.
- This is not a code phrase for privatizing public services. Rather it is a strategy for financing and building more public infrastructure – and building it faster. The core public services and assets will continue to be publicly

owned and controlled.

- If there are user fees or charges, there will be a clear direct link between the fee and the benefit and there will be a demonstrated improvement in the quality of the public infrastructure.
- Mechanisms will exist to ensure that quality service is provided at a fair price and that excess profit cannot be earned.
- At the end of the period (which should be reasonable in length – typically 25 to 30 years), the asset will revert to the public in good condition (deals typically indicate levels of maintenance and repair that must have been performed close to the hand-over date).
- Jobs and benefits will be protected.

IN SUMMARY

It is recognized there is an infrastructure deficit, which must be resolved to enhance our quality of life and improve economic competitiveness.

- Over the last few years, Ontario has made impressive moves in the right direction with its new investment strategies and initiatives to encourage investment in public infrastructure.
- Innovative participation of the private sector to help fund the infrastructure deficit is appropriate, but not in all situations.

Trillium Health Centre - Mississauga

- There are significant funds available to finance public infrastructure through the creative use of public sector pension funds. If these funds are not put to use in Canada, they will continue to be invested to help finance public infrastructure needs elsewhere in the world.
- Innovative financing opportunities will, however, require a commitment by the government.
- Consistency and standardization in developing projects should be promoted.

- A regular and consistent flow of AFP projects should be appropriately communicated to potential investors.
- Workforce availability could be an issue with respect to getting all the work done given the demographic projections and a reduction in availability of skilled trades.
- The public must recognize that public infrastructure is not “free” and that in certain instances user fees are appropriate.

- The decision process as to whether the private sector is to be involved and the type/extent of this involvement must be standardized and formalized.
- This process must be seen to be fair and not be interpreted as the sale of public assets.
- It must be demonstrated (both to the public and to potential bidders) that the decision to involve the private sector in a public infrastructure project is a preferrable option than the traditional delivery method.

Appendix – Generic Range of Non-traditional Delivery Models and Definitions

Operations and Maintenance

- O & M by contract
- Public sector continues to own the asset

Design-Build

- Construction by contract
- Contract can include construction financing, land, etc.

Turnkey Operations

- Public sector finances the project
- Private sector design-build-operate
- Performance-based objectives drive the contract
- Public sector maintains ownership for the duration of the contract

Wrap-around Addition

- Private sector builds and finances an addition
- Private sector operates total asset for a period of time, or until an adequate return on investment is achieved
- Public sector maintains ownership

Lease-Purchase

- Private sector designs, builds, owns and finances the facility
- Leases the facility back to the public sector
- Public sector operates the facility
- Public gains ownership at the end of the lease period

Temporary Privatization

- Ownership of an existing facility is transferred to the private partner who improves/expands the facility
- Facility is owned and operated by the private partner for a defined period of time, or until there is a reasonable return
- Ownership reverts to the public at the end of the period

Lease-Develop Operate or Buy-Develop-Operate

- Private sector purchases or leases the asset
- Private sector expands or modernizes the asset
- Private sector operates the asset under contract (which pays back acquisition cost)
- Ownership reverts to the public sector after a defined period of time

Build-Transfer-Operate

- Public sector contracts with the private sector for them to build and finance the facility
- On completion, ownership is transferred to the public sector (at no cost)
- The facility is leased back to the private sector
- The private sector operates the asset for a defined period of time at a fee to also recover its lease obligations and other costs

Build-Own-Operate-Transfer

- The private sector obtains an exclusive franchise (or concession) for the service
- The private sector builds and finances the assets required to fulfill the franchise obligations
- The private sector operates the asset for a fee (or user fees)
- The asset is transferred to the public sector at the end of the franchise period

Build-Own-Operate

- The private sector gains ownership of an existing asset or builds new
- The private sector operates in perpetuity

Swiss Challenge

- Government department or agency requests bidder qualifications for a project and based on these submissions, selects an interim partner with which to develop preliminary business plan, program of requirements, preliminary engineering designs, etc.
- Document summarizing these initial efforts is open to competitive bidding for defined period (with appropriate bid bonds to maintain discipline of process).
- Government then has option to choose another bidder and pay initial partner for efforts to date, or proceed with original partner.

Appendix – How Have Other Jurisdictions Solved the Problem?

Canada and Ontario are not alone in this dilemma; other industrialized countries face a similar significant infrastructure funding deficit. Some of these countries have addressed this problem earlier and have found acceptable methods of integrating private funds and initiatives to help pay for some of their public infrastructure requirements. This has sometimes been a trial and error endeavour as not all were successful. Ontario can learn from this experience and from countries that have a track record of involving the private sector in some manner in the delivery or financing of their public infrastructure requirements. These include:

- **Finland**, has completed several public/private partnership deals, including the Helsinki-Lahti Design/Build/Finance/Operate (DBFO) road project, which was widely acclaimed as a success, and the Espoa sixth form college. There is also interest in developing such partnerships in the defense and health sectors.
- In the **UK**, the government sees PFI continuing to play a small but important role in the overall objective of delivering modernized public services. It will continue to be used only where it can demonstrate the value of money. It is likely to comprise around 10 to 15% of the total investment in public services. Over 700 projects with a total value of over £46 billion closed as of early 2006. The total PFI deal pipeline over the next 5 years is around 200 projects worth £26 billion in capital value. The Government has established Partnerships UK in 2000 to accelerate the development, procurement and implementation of public private partnerships. They work exclusively with and for the public sector, committing human and financial resources in pursuit of high quality, cost effective and sustainable public services and investments. Partnerships UK is a joint venture between the public and private sectors and so is itself a PPP.
- **Ireland** is expecting the construction of 25 partnership projects commencing in 2006, covering a range of sectors including road, rail, education, justice, water and waste. Ireland has established the National Development Finance Agency (NDFA) to advise State authorities on the optimum means of financing public investment projects in order to achieve value for money. In 2005, the role of the NDFA was expanded to facilitate the establishment of a new Centre of Expertise which will be responsible for the procurement of all new PPP projects in the Central Government area (with the exception of roads and rail, where existing arrangements with the NRA and RPA will continue).

- **Germany** is principally developing partnerships in a wide range of sectors, such as schools, sport, tourism, leisure and administrative offices (for municipalities) and transport, administrative buildings and the judiciary (at federal and Land level). Further important sectors include culture, childcare, urban development, the environment and supply services (municipalities) and health, public safety and e-government. PPP projects have been around for many years, but such cooperation has only really taken off since around 2004. The number of signed contracts increased by 100% in 2004 and 2005 on the previous years. Current municipal PPP projects are estimated to consume a total of three billion euros of investment for all municipalities.

- **The Netherlands** established a P3 knowledge centre in 1999 to gather together and make accessible the knowledge and experience of both the private sector and government agencies, to design clear and effective rules for collaboration between government agencies and the private sector, to suggest appropriate projects for public-private partnership, and to produce regular reports on the results of public-private partnership. Public/Private partnerships were first established in the transport sector starting with the concession for the High Speed Line (HSL). They are now being rolled out to utilities, health, education, prisons and government buildings.

- **Portugal** has been using the public private partnership model for about 10 years, a similar length of time to the UK, and Portuguese PPP investment is now comparatively high. More recently, PPP in Portugal has spread from the transport sector to other public service sectors.

- In **Australia**, the first DBFO occurred in the early 1990s. In some cases these failed and the public sector had to re-assume responsibility for the schemes. Victoria, New South Wales and Queensland have now developed partnering policies and ambitious plans for future investment. A Nation PPP Forum was set up in 2004 to facilitate greater consistency and cooperation across jurisdictions in the provision of infrastructure through public private partnerships (PPPs). Information at the National PPP Forum indicates that across the country, there are currently 29 projects being contracted, 17 projects in the market, and another potential 17 projects in the pipeline, of which 5 projects are expected to be released to the market within the next 12 months.

- **Brazil** enacted a Public-Private Partnership (PPP) law to attract private investment for important infrastructure projects. The Bill establishes general rules and requirements for public-private partnership bidding processes and contracts within the jurisdiction of the government and public sector entities. It also creates an executive managing group with the objectives of setting procedures for PPP acts or contracts; definition of activities, investments or

services; and authorization for starting public tenders. The government is eager to attract investment in utilities using this PPP model, especially in highways and energy projects.

- In **Canada**, British Columbia formed Partnerships BC to take forward that province's projects agenda. Partnerships BC is intended to provide specialized services, ranging from advice to project leadership/management, to government and its agencies with respect to identifying opportunities for maximizing the value of public capital assets and developing public private partnerships. It also aims at fostering a business and policy environment for successful public private partnerships and related activities by offering a centralized source of knowledge, understanding, expertise and practical experience in these areas; and managing an efficient and leading edge organization that meets or exceeds performance expectations. Partnerships BC is initially focused on roads and bridges. These include the Sea-to-Sky Highway, Fraser River Crossing and Kelowna Floating Bridge. They are now being rolled out to health, senior housing, sports centre and water treatment plants. Currently, there are 9 projects under construction or in operation and 5 projects in procurement.
- In **Japan**, a private finance law was enacted in 2000 and the first PFI commenced later that year. Since then the process has, however, progressed more slowly than expected. Seven deals have reached financial close and 49 are in the pipeline.
- In **Mexico**, public/private partnerships are being used as a solution to a $20 billion project schedule. Individual states are encouraged to come up with pilot projects as well.
- **South Africa** has looked closely at public/private partnerships for some time and set up a Governmental Task Force in 1997 and a PPP Unit in 2000. In addition, the Public Finance Management Act passed in 2000 governs the implementation of public/private partnerships. Twelve deals have reached financial close and 52 are in preparation.
- In **Spain**, while public/private partnerships have a long history (mainly in the roads sector), the market is currently seeing an expansion of PPPs into new sectors such as healthcare, education, prisons, government buildings and accommodation projects. In December 2004, the Spanish government disclosed its plans to spend up to €214 billion by 2020 in the next phase of public sector projects in Spain and it is expected that PPPs will account for 20% of that figure. The government's infrastructure plans will be coordinated with the plans of each autonomous community. Regional governments and municipalities in Spain are the driving force behind the development of PPPs in Spain at present. Many have already undertaken PPP projects across a number of different sectors.

As noted, many of the above countries have well-established policies and procedures, not only to select projects where innovative financing procedures could apply, but also to ensure that the "deal" meets established project guidelines and is, in fact, a good deal. It is important to note, however, that does not, necessarily, imply a sale of the asset or loss of public control. In many jurisdictions the focus is on creating an environment where private funds and other private sector strengths can be employed, without loss of public control over pricing and quality of service.

Using alternate financing methods to supplement direct investment by the public sector is also not applicable to all types of projects for a variety of reasons. Nevertheless, in the UK 10% to 13.5% of the annual investment in public infrastructure is now funded in a non-traditional manner involving private sector financing.

As noted in *Building a Better Tomorrow*, there is an extensive range of generic models for infrastructure financing. Some of these lend themselves to private sector involvement (a more specific listing of models where the private sector could participate in financing and operating is appended). From a review of this list, it is clear that not all models apply to all situations and, in fact, they often achieve different policy objectives. The UK experience is perhaps most interesting for Ontario.

The use of partnerships and innovative financing in the UK dates back in its current form to the mid 1990's and considers a full range of options. The one most appropriate to the Ontario situation (and in our opinion the most likely to help unlock the significant funding potential using public sector pension funds), is the tool referred to as "Private Finance Initiative" (PFI). This initiative is defined as "…the public sector contracts to purchase quality services on a long-term basis so as to take advantage of private sector management skills incentivised by having private finance at risk…". The key aspects of this approach are: the government purchases the service; the arrangement is for a defined term; and there is a transfer of risk to the private sector.

A recent review of the PFI program highlights the following:

- As funds do not flow to the private partner until the project is ready, schedules are typically fully adhered to and budget exceedances are very unusual unless project scope or specifications change.
- The benefits are not achieved from construction alone (particularly in a design-build situation). The real benefits are obtained if the private sector is involved in the project for the long term and is "forced" to consider life-cycle costs.

- It is generally recognized that the government's cost of capital is usually lower than the private sector. However, when these projects have been evaluated on a risk adjusted basis (incorporating schedule and cost over-runs), the private sector approach is often less costly.
- Innovative approaches to financing can only be considered where definite value for money can be demonstrated. It is also important to understand that value for money cannot be at the expense of existing public sector staff. To ensure that these objectives are met and consistently applied, innovative financing models are only considered under the following conditions:
    - The private sector has to have experience and there has to be a demonstrated value for money (there is a formal documented process which must be used to demonstrate value for money);
    - It must be possible to clearly define and measure expected service outputs (in the UK, this is done through rigorous third party performance audits);
    - It must be demonstrated that involving the private sector as part of an innovative financing scheme is the best procurement model given other possible options;
    - It must be possible to life cycle cost the service over on extended period of time; and
    - Projects must be of sufficient size and scale that transaction costs (both for the government and private sector participants) are not disproportionately large.

Although there is a bias to use innovative public sector financing schemes where there is a long-term operating and/or maintenance component, construction projects with long-term take-out financing that do not involve a parallel arrangement for operation and maintenance are also considered.

The Australian experience is also very interesting for Ontario. A national approach is deployed in Australia, in order to:

- Promote consistent approaches to developing projects across all States and Territories – including standardized risk allocation models, tendering processes, interactive bidding processes and so on.
- Develop better coordination, information sharing and support among the States, Territories and private industry.

Greater consistency in the implementation of PPPs by Australian Governments would reduce bidding costs, whereas increased national co-operation will streamline the bidding process and better co-ordinate the pipeline of projects going to the market.

Governments will also benefit from a more competitive market, with improved value for money in project delivery.

The National PPP Forum was set up for resolving key industry concerns. It is designed to deliver improved project and related service outcomes through harmonizing policies and processes, and encouraging better coordination and information sharing among Australian governments. It aims to facilitate greater consistency and cooperation across jurisdictions in the provision of infrastructure through public private partnerships (PPPs). It also aims to develop public sector staff who are highly skilled and experienced in PPPs through training programs, sharing staff across jurisdictions and knowledge transfer across projects and jurisdictions. The Forum comprises members from all States, Territories and the Federal government. Members are working together to reduce bid costs, increase the level of consistency across jurisdictions and to share lessons learned to increase skills and knowledge in the public sector. Greater cooperation is expected to reduce transaction costs for both public and private sectors, improve the value for money outcomes of projects undertaken, and assist in public and private forward planning for PPP projects.

The Forum also publishes a regular list of the pipeline of PPP projects across Australia – giving forewarning to the market of current and future projects and indicating the sectors in which new business opportunities are likely to arise. It shows a clear picture that Australia's national PPP market is a significant development/business in itself.

Through the National PPP Forum, Australia is taking action to make sure that they send a positive signal that the Australian government is committed to PPPs and committed to smoothing the path for potential investors. Such signals cannot be sent from a fragmented and uncoordinated market with differing standards, rules and processes. Instead, it requires a national approach and national leadership.

Bibliography

1. Critical Condition: Canada's Infrastructure at the Crossroads; Canadian Society for Civil Engineers; 2003.
2. Civil Infrastructure Systems Technology Road Map 2003-2013 (A national Consensus on preserving Canadian Community lifelines); Canadian Society for Civil Engineers – Project Coordinator); 2003.
3. PFI: Meeting the investment challenge; HM Treasury, 07/03.
4. Public Private Partnerships - UK Expertise for International Markets 2003; International Financial Services, London; 2003.
5. Insights on the Canadian Economy: Public Infrastructure in Canada: Where Do We Stand? Statistics Canada Catalogue 11-624-MIE-No.005.
6. Capital Expenditures by Type of Asset 1997 Statistics Canada Catalogue 61-223-XIB.
7. Ministry of Transportation Business Plan 2002-2003 Queens' Printer for Ontario, 2002; ISBN 0-7794-3457-9.
8. Cautionary Signals: Transit Near the Breaking Point; CUTA and OCTA submissions in response to Ontario Minister of Finance Greg Sorbara's 2004 Pre-Budget Consultations.
9. Places to Grow: Proposed Growth Plan for the Greater Golden Horseshoe. Ministry of Public Infrastructure Renewal. November, 2005.
10. ReNew Ontario 2005-2010 Strategic Highlight: A five-year infrastructure investment plan to strengthen our economy and communities. Ministry of Public Infrastructure Renewal. 2005.
11. Building a Better Tomorrow: An Infrastructure Planning, Financing and Procurement Framework for Ontario's Public Sector. Ministry of Public Infrastructure Renewal. 2004.
12. New Frontiers: Trends & Capital Flows. David G. Mather, Executive V.P. Integrated Asset Management Corp. November 11, 2005.
13. "Partnership or Perish: Why are the pensions of Canadians financing public infrastructure across the Atlantic when our largest City can't afford to replace the leaky water pipes?" (The National Post, February 2, 2005). The Canadian Council of Public-Private Partnerships

14. “Pension funds hail investment plan: Private sector would build, finance infrastructure projects. Up to $30 billion in 5 years for schools, roads, hospitals”. Dana Flavelle and Tony Wong. The Toronto Star. May 12, 2005.

15. “Ontario eyes pension funds to pay for infrastructure”. Karen Howlett. The Globe and Mail. May 11, 2005.

16. “CPP Investment Board Expands Infrastructure Commitments by $470 Million”. CPP Investment Board News Release. January 24, 2005.

17. OMERS Asset Mix. www.omers.com 2006.

18. OTPP Inflation-Sensitive Investments. www.otpp.com 2006.

19. “Pension plans are looking at infrastructure to help them build a sound portfolio.” Alexandre Daudelin. Investment Q&A. www.benefitscanada.com November, 2005.

20. "Rebuilding Infrastructure without P3s". Paul Moist. National Post. August 25, 2004.

21. "Hampton's wrong: Infrastructure needs private funds". John Barber. The Globe and Mail. May 12, 2005.

22. PPP Project Tracker As of 3/7/2006. The Canadian Council of Public-Private Partnerships. 2006.

23. PPP Project Tracker As of 4/6/2006. The Canadian Council of Public-Private Partnerships. 2006.

24. “Infrastructure Ontario Discusses Approach and Deal Flow for Alternative Financing & Procurement”. The Canadian Council of Public-Private Partnerships. 2006.

25. Responsible PPP Procurement for British Columbia. The Canadian Council of Public-Private Partnerships. April, 2005.

26. 100 Projects: Selected Public-Private Partnerships Across Canada. The Canadian Council of Public-Private Partnerships. April, 2005.

27. Ontario – Canada’s Latest PPP Covert. March 27, 2006. http://www.ijonline.com/

28. “Canadian Project Finance – 2005 in Perspective”. Brian Kelsall. Infrastructure Journal. http://www.ijonline.com/

29. 2006 Ontario Budget.

30. PFI: strengthening long-term partnerships. HM Treasury. March, 2006.

31. Partnerships UK. http://www.partnershipsuk.org.uk/

32. Speech by David Dodge, Governor of the Bank of Canada to the Canadian Council for Public-Private Partnerships, Toronto, Ontario. November 28, 2005.

33. A national approach to PPPs: The importance of creating a 'single market' appearance to gain global attention: Australia's experience Speech by The Hon John Brumby MP Treasurer of Victoria, Australia, Minister for State and Regional Development. November 28, 2005.

34. National Public Private Partnerships (PPP) Forum. Background and Vision. www.pppforum.gov.au

35. Irish Government Public Private Partnership (PPP) website. http://www.ppp.gov.ie/

36. Public Private Partnership Projects in Germany: A survey of current projects at federal, land and municipal level Summary. The German Institute of Urban Affairs (Difu) on behalf of the PPP Task Force at the Federal Ministry of Transport, Building and Housing (BMVBW).

37. Netherlands PPP Knowledge Centre. http://pps.minfin.nl

38. Public-Private Partnerships: Some lessons from Portuguese experience. Luxembourg. January20th, 2005 EIB Conference on Economics & Finance. Rui Sousa Monteiro (ParpúblicaSA)

39. Brazil's Public-Private Partnership Law.

40. Brazil's New PPP Bill: Implications for Energy Projects. World Trade Executive. Luiz Borges (BNDES - Rio de Janeiro). April, 2005.

41. South Africa National Treasury

    http://www.treasury.gov.za/organisation/ppp/default.htm

42. South African National Treasury PPP Unit. http://www.ppp.gov.za/

43. Taking Forward PPPs at the Regional and Municipal Level in Spain. City and Financial. http://www.cityandfinancial.com/conferences/?sector=1&id=93