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IMFG forum

Borrowing Today for the City of Tomorrow?

Municipal Debt and Alternative Financing

Kyle Hanniman, IMFG

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About IMFG

The Institute on Municipal Finance and Governance (IMFG) is an academic research hub and non-partisan think tank based in the Munk School of Global Affairs at the University of Toronto.

IMFG focuses on the fiscal health and governance challenges facing large cities and city-regions. Its objective is to spark and inform public debate, and to engage the academic and policy communities around important issues of municipal finance and governance.

The Institute conducts original research on issues facing cities in Canada and around the world; promotes high-level discussion among Canada's government, academic, corporate and community leaders through conferences and roundtables; and supports graduate and post-graduate students to build Canada's cadre of municipal finance and governance experts. It is the only institute in Canada that focuses solely on municipal finance issues in large cities and city-regions.

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Author and Acknowledgements

This *IMFG Forum* paper was prepared by Kyle Hanniman, IMFG's Post-Doctoral Fellow for 2012-13. Kyle received his PhD in Political Science from the University of Wisconsin-Madison in 2012. His current research examines the relationship between fiscal federalism and government credit markets. His broad research interests are political economy and political institutions.

The author would like to acknowledge helpful comments from André Côté, Enid Slack, and Matti Siemiatycki.

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This paper does not necessarily reflect the views of IMFG, its partners and funders, or the presenters at the two sessions. Any errors or misinterpretations rest with the author and editor.

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Executive Summary

In early 2013, the Institute on Municipal Finance and Governance (IMFG) hosted a two-part forum called "Borrowing Today for the City of Tomorrow." The series, co-sponsored with KPMG, brought together academics, government officials, and market participants to discuss the role of borrowing and alternative financing mechanisms in addressing Canada's municipal infrastructure needs. This paper, like the forum, addresses two issues: whether municipalities can and should borrow more, and the role of public-private partnerships (P3s) in addressing the municipal infrastructure gap. The key lessons from the forum are distilled under these headings.

A. Can and should municipalities borrow more?

Borrowing is part of the solution to Canada's municipal infrastructure gap. The municipal infrastructure gap is too large to plug with current revenues alone and political resistance to increasing taxes, fees, and transfers is high. Moreover, the benefits of capital investments accrue over generations, but the brunt of their costs is borne by today's taxpayer. By borrowing, municipalities can distribute the costs of assets over the life of those assets.

Canadian municipalities have good access to debt capital markets. They are benefiting from low interest rates, a growing investor base, and strong demand for long-term bonds. Now is the time to borrow.

But prudence remains a virtue. The struggles of several American cities and European countries demonstrate that municipal borrowing still poses risks. And borrowing is not the only means of paying for infrastructure investment. Borrowing should be balanced with efforts to enhance core revenues and limit long-term dependence on capital markets.

B. Alternative financing through public-private partnerships (P3s)

P3s offer several benefits and risks. P3s are contractual arrangements between the public and private sector in which the latter delivers a service or project and assumes some financing, technical, or operating risk. Potential benefits include efficient risk sharing across public and private sectors, improved performance accountability, and opportunities to leverage private-sector expertise and innovation. Potential risks include reduced policy flexibility and windfall private-sector profits.

Obstacles to municipal P3s are pronounced but surmountable. Execution of local P3s is hindered by small transaction sizes, lack of local expertise, fragmented local institutions, and the openness of the local approval process. Many municipalities, however, have successfully addressed these challenges.

Canada's approach to P3s provides distinct advantages. Canadian P3s transfer limited risk to the private sector. Canadian governments reserve the right to deduct payments for poor performance, but do not place a heavy onus on the private sector to generate project revenues. This approach shifts a greater proportion of project costs onto taxpayers, but reduces the risk of project failures.

But concerns remain about the transparency of the pricing of project risk premiums. Despite incurring relatively few risks, the private sector is often paid significant risk premiums. Although these premiums may reflect objective project risks, it is difficult to know for sure given the opacity of the pricing process.

Borrowing Today for the City of Tomorrow?

Municipal Debt and Alternative Financing

Introduction

The Federation of Canadian Municipalities recently estimated that it will cost $172 billion to replace municipalities' crumbling roads and their stormwater, wastewater, and drinking water systems.[1] But where will the money for infrastructure investment come from? Municipal tax and fee increases are one possibility, but municipal tax bases are limited and politicians are reluctant to hike property taxes and fees. Cities and municipal associations want Ottawa and the provinces to increase transfers, but senior governments face their own fiscal challenges. Another option is increased municipal borrowing.

Borrowing is an efficient and equitable means of financing long-term infrastructure projects and Canadian cities currently benefit from low interest rates and well-developed capital markets. But as the experience of several European countries and American cities illustrates, borrowing also poses risks.

In recognition of these risks and opportunities, the Institute on Municipal Finance and Governance organized a two-part forum on the role of municipal borrowing and alternative financing models in addressing Canada's municipal infrastructure needs. Experts from the public and private sectors addressed two questions: Can and should municipalities borrow more to address their long-term infrastructure needs and if so, what measures and financing mechanisms should be used to ensure borrowing is low-cost and low-risk? The first session dealt with the former question and the second explored the advantages and challenges associated with public-private partnerships.

A. Borrowing

1. Can and Should Municipalities Borrow More?

A recent report by the OECD[2] reveals that subnational credit conditions in certain countries have grown increasingly precarious in the wake of the global financial crisis. Canadian municipalities have not been immune from these trends. They, like many other governments (including the Canadian provinces), were unable to borrow in the bond markets shortly after the Lehman Brothers default. But municipal credit conditions have improved markedly since the crisis peak.

Jason Stewart, Head of Government Finance at National Bank Financial (NBF), reported that municipalities are now benefiting from rock-bottom interest rates, a growing investor base, and strong demand for long-term bonds in the 30- to 40-year range.

One recent trend in municipal bond markets, he noted, is the growing demand from American managers of Canadian-dollar funds. American insurance companies, pension funds, and asset managers are increasing their Canadian municipal holdings, attracted by the sector's mix of (relatively) high yields and stellar credit ratings. Today there are about 20 potential and 11 regular U.S. buyers of Canadian municipal bonds, a significant increase from just a few years ago. Growth in American demand has been primarily concentrated in liquid bullet issues, a market segment dominated by a handful of large municipal borrowers (see Table 1).

Municipalities have also been able to extend their bond maturities in recent years. Some issuers, including Toronto, Winnipeg, Vancouver, and TransLink (Greater Vancouver's transit agency), have issued in maturities of 30 and 40 years. This is good news for municipalities. It limits refinancing risk and allows them to match the duration of their bond issues with the life of their capital investments. Demand for longer maturities is partly due to low yields on short-term bonds, and partly a testament to the creditworthiness of municipal borrowers, Stewart explained.

Lenders' confidence in municipalities came as no surprise to **Jennifer Wong, a credit analyst and Assistant Vice President with Moody's Investors Service.** Moody's rates 15 Canadian municipalities, all of which fall within the narrow rating range of AAA to Aa2 (see Table 2), well above the median A3 rating of the more than 200 non-U.S. local and regional governments that Moody's rates. Wong linked Canadian municipalities' good credit performance to several factors, including strong balance sheets, conservative governance and management practices, stable revenues and expenditures, robust provincial oversight of municipal finances and borrowing, and the strong likelihood of provincial bailouts for distressed municipalities.

Table 1: Major Municipal Bond Issues by Borrower (2012)

Issuer	Size	Term
Municipal Finance Authority BC	$220 mm	5-year
	$165 mm	10-year
	$125 mm	10-year
City of Montreal	$210 mm	10-year
	$165 mm	20-year
City of Ottawa	$175 mm	30-year
Region of Peel	$300 mm	30-year
City of Toronto	$300 mm	30-year
	$300 mm	10-year
TransLink	$150 mm	40-year
	$100 mm	40-year
City of Vancouver	$120 mm	40-year
City of Winnipeg	$ 75 mm	40-year
	$ 50 mm	40-year
Region of York	$250 mm	20-year
	$150 mm	20-year

Source: Canadian Council for Public Private Partnerships

Municipal debt instruments in Canada

Municipal borrowers in Canada issue two types of general obligation debt: serial and bullet bonds. A serial bond issue is one in which outstanding bonds mature in installments. In a bullet bond issue, the bond's entire principal is repaid on the maturity date. Serial structures have the advantage of smoothing debt servicing costs over time, but municipal bullet maturities are typically offset by sinking funds and command a broader investor base.

Traditionally, Canadian municipalities issued almost exclusively in serial format. In recent years, the growing borrowing needs of large municipalities have increased bullet issuance significantly. Aggregate bullet and serial issuance was roughly equal in 2012, at $2.9 billion and $3.1 billion, respectively, according to National Bank Financial data. Table 1 lists the major bullet issues by Canadian municipalities in 2012.

Table 2: Credit Ratings of Municipalities Rated by Moody's Investors Services

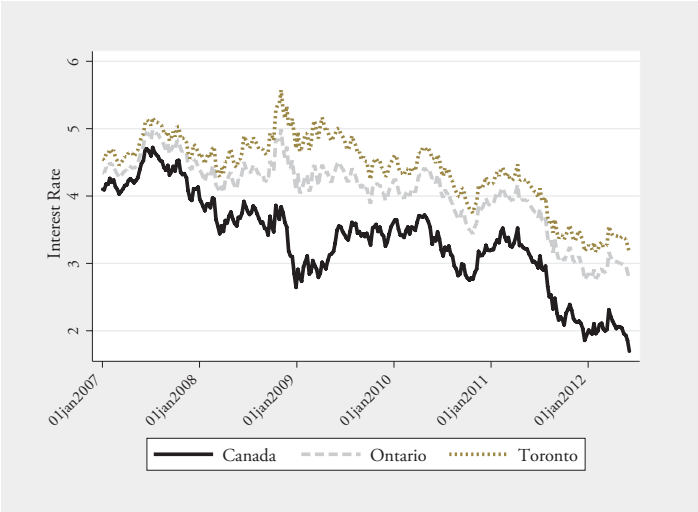
Municipality	Credit Rating	Outlook
Region of Durham	Aaa	Stable
Region of Halton	Aaa	Stable
City of London	Aaa	Stable
City of Montreal	Aa2	Stable
District of Muskoka	Aa2	Stable
City of North Bay	Aa2	Stable
City of Ottawa	Aaa	Stable
Region of Peel	Aaa	Stable
Quebec City	Aa2	Stable
City of St. John's	Aa2	Stable
City of Toronto	Aa1	Stable
City of Vancouver	Aaa	Negative
Region of Waterloo	Aaa	Stable
City of Winnipeg	Aa1	Stable
Region of York	Aaa	Stable

Source: Moody's Investors Services; ratings and outlooks as of March 2013

Both Wong and Stewart agreed that municipalities' greatest advantage is Canada's "halo" effect. Canada is the only G8 country accorded stable triple-A ratings by all the major international rating agencies. Its status places a high floor under municipal ratings and lowers interest rates across the entire economy. Annual interest rates on 10-year municipal bonds hovered just above 3 percent for most of 2012 (see Figure 1).

In short, Canadian municipalities have little trouble borrowing. But should they be taking advantage of these credit conditions?

Figure 1: Interest Rates on 10-year Bonds



Source: BMO, Bloomberg, Author's Calculations

2. Is Now the Time to Borrow?

The first panel was unanimous in the view that borrowing is an essential component of a prudent fiscal strategy. But borrowing is also risky and needs to be approached with caution and an eye to growing core revenues and limiting long-term dependence on capital markets.

As **Barrie Mayor Jeff Lehman** noted, without borrowing, many projects would never see the light of day. He cited Barrie's new water treatment plant, which cost $150 million, equal to the city's annual capital budget and far too expensive to fund with tax dollars alone.

Municipalities would also do well to take advantage of today's low interest rates, Stewart noted. "I firmly believe that 5, 10, 20 years from now, chief financial officers and treasurers are going to be carried around on the shoulders of their mayors and...council members for being able to finance 30- and 40-year assets for less than 4 percent. It is just staggering to be able to achieve these funding levels."

"I firmly believe that 5, 10, 20 years from now, chief financial officers and treasurers are going to be carried around on the shoulders of their mayors and...council members for being able to finance 30- and 40-year assets for less than 4 percent."

Borrowing was also defended as a means of promoting intergenerational equity. Infrastructure investments are notoriously lumpy, noted session moderator **David Amborski of the School of Urban and Regional Planning at Ryerson University.** Their benefits accrue over many generations, but the brunt of their costs is borne by today's taxpayers. By borrowing,

municipalities can distribute the costs of assets over the lifetime of those assets.

3. Prudence Remains a Virtue

The panel was also wary of the risks of excessive borrowing. Cities should take advantage of low interest rates, argued Stewart, but they should not overextend themselves. Borrowing can lock municipalities into spending patterns that become unsustainable when credit conditions change. "These [favourable credit] environments end in tears three, five, or seven years down the road. We don't know what's going to bump, but something will."

The optimal level of borrowing also depends on municipalities' responsibilities, Stewart added. Canadian cities and regions are allowed to borrow for capital investment only, but infrastructure serves different purposes in different jurisdictions. Ontario municipalities, he noted, have heavier social responsibilities, which puts a greater strain on budgets than the more growth-enhancing capital outlays in Western provinces. He also expressed concerns about municipalities' borrowing against their limited tax bases. "If…municipalities increase their borrowing, they [either] need more revenue streams, lesser non-capital expenditure responsibilities, or some combination of both."

Participants also emphasized that borrowing is not the only way of paying for infrastructure. Municipalities have other options at their disposal, noted Lehman, including limiting fee discounts and fundraising. They can also improve cost recovery for services by shifting a greater proportion of revenue generation from property taxes to user fees. The biggest challenge facing municipalities, he argued, is not infrastructure growth, but infrastructure renewal, and the only way of securing the latter is by increasing municipalities' core revenues.

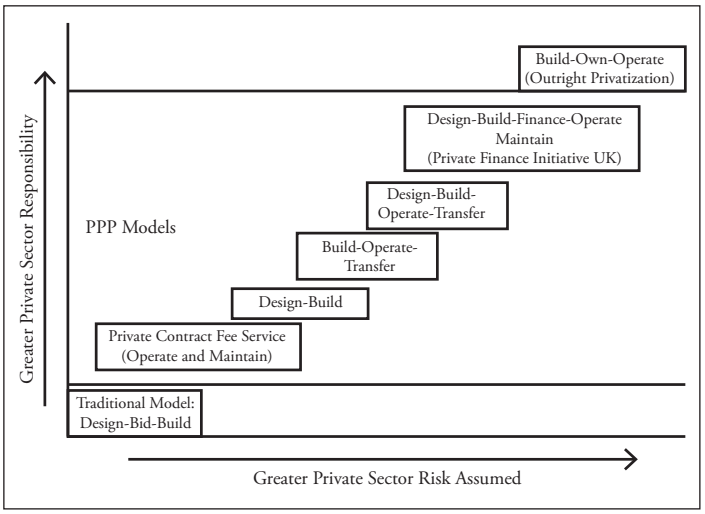
In short, borrowing is not a panacea for municipalities' infrastructure needs, but one component of a broader strategy of growing and renewing Canada's municipal infrastructure base.

B. Alternative Financing through P3s

Public-Private Partnerships (P3s) are contractual arrangements between the public and private sector in which the latter delivers a service or project and assumes a measure of financing, technical, or operating risk. P3s are generally used for large-scale infrastructure projects, ranging from hospitals and wastewater systems to transit and housing projects (Table 3 in the Appendix provides a list of municipal P3s in Canada).

A P3 bundles the finance, design, construction, maintenance, and operation components of a project into a single concession and awards it to a private-sector consortium through a competitive bidding process. Defined in the loosest sense, P3s range from simple design-build models (in which the private sector designs and builds the project at a set price) to complex arrangements in which the private sector finances, operates, and maintains aspects of the project over an extended period (usually 30 years or more) (see Figure 2).[3] As Siemiatycki and Farooqi note, P3s "transform the role of government from a provider to a purchaser of public services."[4]

Figure 2: The Range of P3 Models for Large Infrastructure Projects



Source: Canadian Council for Public-Private Partnerships

Done properly, P3s deliver benefits that include more efficient distribution of risk across the public and private sectors, improved accountability for project performance, and the opportunity to leverage private-sector innovation and expertise. But critics point to several risks, including lost policy flexibility and the potential for windfall private-sector profits. Participants in IMFG's second panel were asked to assess the advantages and disadvantages of P3s and the challenges of pursuing them at the municipal level.

1. Pros and Cons

The most notable benefit of P3s is risk transfer. Public-private partnerships cost more than traditional projects, but the premium reflects risks assumed by the private sector. These include cost overruns incurred during construction, failure to maintain assets or provide services on schedule, or (in the extreme) failure to generate sufficient revenue to cover project costs.

Another advantage of public-private partnerships concerns performance accountability. P3s enhance accountability by placing private capital at risk: the private-sector does not get paid unless it meets specified performance standards. This leverage was one reason Ottawa chose to

procure its light-rail transit (LRT) line in a P3 format, explained **Mona Monkman, Deputy City Treasurer for the City of Ottawa**. The private sector is on the hook for designing, building, partially financing, and maintaining the line, but is not receiving construction and maintenance payments in single lump sums. Rather, it is being paid in installments conditional on contract performance. This feature increases the private sector's incentives to fulfil its contractual obligations, Monkman explained.

P3s also leverage private-sector innovation and expertise. **Jonathan Erling, Managing Director of KPMG's Public Infrastructure Advisory,** noted that these opportunities are rife at the municipal level. He gave the example of wastewater treatment plants, facilities embodying sophisticated and rapidly evolving technologies. Operating these systems requires technical expertise that municipalities often lack. Municipalities may prefer to transfer these operations to the private sector as a result.

Nevertheless, P3s pose risks. Chief among them is the potential for pricing distortions. The P3 model should, in theory, facilitate efficient risk sharing between the public and private sectors. In reality, risk premiums are difficult to assess and the pricing process is far from transparent. This situation creates the potential for inflated risk premiums and windfall private-sector profits.

P3s have also been accused of undermining worker wages and benefits by excluding public-sector employees from project delivery. But **Matti Siemiatycki, Professor of Geography and Planning at the University of Toronto,** pointed out that this has tended not to be the case in Ontario, where nearly all P3s "have maintained the role of unions."

Finally, some critics claim that P3s curtail policy flexibility by locking in private delivery of public services. This concern also appears exaggerated, at least in Ontario. As Erling explained, governments regularly transfer routine maintenance tasks for hospitals, recreational centres, and other public facilities while retaining control over health care services, recreational activities, and other "programmatic elements" of public assets.

2. Challenges at the Municipal Level

P3s in Canada have been less prevalent at the municipal than at the federal and provincial levels. Ontario has used P3s extensively to rebuild its hospital and prison networks, but local projects often lack the scale to attract financing or to generate cost savings using a P3 format. The minimum capital expenditure threshold for justifying a P3 is generally $20-million, while $50-million is considered closer to ideal. As **Steve Rohacek, Vice President of Business Development and Lending at Infrastructure Ontario**, explained, deals of this size are one-in-20-year events for most large municipal assets (e.g., sewage, transit, waste diversion, and arena facilities).

Local P3s also face stiffer political obstacles. There is more scrutiny of P3s at the local level, not least because projects must be approved by council in full public view (federal and provincial deals are approved by treasury boards behind closed doors). This requirement places the onus on city staff to justify projects that appear to be more expensive than traditional infrastructure deals. One of the keys, argued Monkman, is emphasizing the merits of paying the private sector to assume otherwise public-sector risks. Monkman should know. She and her staff were given the task of justifying procuring Ottawa's multi-billion dollar LRT line as a P3. Her strategy was to avoid the arcane language of "risk financing premiums" and to focus instead on the concrete risks of cost overruns and even tunnel collapse (a material risk with respect to the Ottawa line). She also emphasized the P3's potential to enhance contract performance. The project eventually won council's unanimous support.

Another challenge at the municipal level is the lack of expertise and institutional coordination. Municipalities are often overwhelmed by the complexities of assessing and implementing P3s and lack central agencies capable of coordinating projects across line departments, explained Erling. But municipalities can turn to provincial agencies such as Partnerships BC, Infrastructure Quebec, and Infrastructure Ontario for assistance in procurement and project delivery.

3. A Superior Canadian Model?

Moderator **Cam Weldon, Toronto's former Deputy City Manager and Chief Financial Officer,** noted that Canada's P3 debate has advanced considerably. Whereas past opposition to P3s was often ideological, criticism has shifted to technical concerns about value for money and transparency as governments have gained experience with the P3 model. At the same time, proponents have become less naive about the model's potential as a private funding mechanism. Today, the critical question is no longer whether to use P3s, but how and under what conditions.

Several panelists agreed that other jurisdictions have a lot to learn from Canada's conservative approach. Canadian governments have generally transferred fewer risks to the private sector than decision makers in other jurisdictions. Canadian governments reserve the right to deduct payments for poor performance, but do not put the onus on private consortia to generate revenues to pay for services or construction costs. This approach shifts a greater proportion of costs onto taxpayers, but Siemiatycki sees virtue in this approach. The private sector is often ill-equipped to assume

revenue risk. A stable stream of government revenues reduces the risk of project failures that may cost governments more in the long run.

4. Concerns About P3s Remain

Nevertheless, critics (including sympathetic ones like Siemiatycki) worry that Infrastructure Ontario and other senior government agencies may be promoting municipal P3s too aggressively, encouraging cities to use them where traditional methods are more appropriate. Rohacek insists Infrastructure Ontario is not in the business of evangelizing for P3s. The agency often asks municipalities to weigh the costs and benefits of alternative procurement methods, but the choice of model ultimately lies with local officials. He added that in most cases, traditional procurement remains the most appropriate option.

Risk transfer has become the *raison d'être* for public-private partnerships in recent years, but are taxpayers getting their money's worth?

Siemiatycki also raised concerns about the transparency of the risk pricing process. There is no question that risk transfer comes at a cost, but a recent study of a sample of P3s in Ontario by Siematyki and a colleague revealed an average risk premium of roughly 50 percent of the base cost of delivering the project through traditional methods.[5] This premium may be justifiable, Siemiatycki said, but there is no way to know for sure, given the opacity of the pricing process. Publicly available value-for-money reports[6] do not provide detailed breakdowns of the costs of transferring specific risks.

Siemiatycki's comments raise an important issue. Risk transfer has become the *raison d'être* for public-private partnerships in recent years, but are taxpayers getting their money's worth? Or are risk-averse politicians, fearful of project failures, construction delays, and cost overruns, overcompensating their private partners? This may become the principal question in today's increasingly technical, and decreasingly ideological, P3 debate.

C. Forum Participants

Session 1

Jason Stewart, Managing Director, Debt Capital Markets and Head of Government Finance, National Bank Financial

Jennifer Wong, Assistant Vice President, Sub-Sovereign Group, Moody's Investors Services

Jeff Lehman, Mayor, City of Barrie

David Amborski, Professor, School of Urban and Regional Planning, Ryerson University (moderator)

Session 2

Matti Siemiatycki, Department of Geography and Planning, University of Toronto

Steve Rohacek, Vice President, Business Development and Lending, Infrastructure Ontario

Mona Monkman, Deputy City Treasurer, City of Ottawa

Jonathan Erling, Managing Director, Global Infrastructure Advisory, KPMG

Cam Weldon, former Deputy City Manager and CFO, City of Toronto (moderator)

Endnotes

1. Federation of Canadian Municipalities, *Canadian Infrastructure Report Card*, vol.1, 2012, Municipal Roads and Water Systems.

2. Camila Vammalle and Claudia Hulbert, *Sub-national Finances and Fiscal Consolidation: Walking on Thin Ice,* OECD Regional Development Working Papers, 2013/02, OECD Publishing, 2013.

3. U.S. Department of Transportation, Federal Highway Administration, Office of Innovative Program Delivery, "Risk Assessment for Public-Private Partnerships: A Primer," Washington, D.C., 2012.

4. Matti Siemiatycki and Naeem Farooqi, "Value for Money and Risk in Public-Private Partnerships," J*ournal of the American Planning Association*, vol. 78, no. 3 (2012), 286–299.

5. Ibid.

6. Value for money reports compare the costs of delivering infrastructure projects in traditional and P3 format.

APPENDIX

Table 3: List of Municipal Infrastructure Projects Procured in P3 Format

Project Name	Owner	Sub Sector	Model	Current Stage	Financial Close Date Actual
John Labatt Centre	City of London, ON		D-B-F-M-O	Operational	31-Jul-2001
Viva	Regional Municipality of York, ON	Public Transit	D-B-F-O-M	Operational	27-Jun-2002
Vancouver Landfill Gas Cogeneration Project	City of Vancouver, BC	Water & Wastewater	B-Own-O	Operational	15-Jan-2003
Canmore Water & Wastewater System	Town of Canmore, AB	Water & Wastewater	M-O	Operational	15-May-2000
Moncton Water Treatment Facility	City of Moncton, NB	Water & Wastewater	D-B-F-O	Operational	01-Apr-1998
Goderich Water & Wastewater System	Town of Goderich, ON	Water & Wastewater	M-O	Operational	01-Dec-2000
Ottawa Paramedic Service Headquarters	City of Ottawa, ON	Hospitals	D-B-F-M	Operational	01-Jun-2004
Red Ball Internet Centre	Moncton 4Ice Sports Inc., NB		D-B-F-O	Operational	01-Jan-2002
Sooke Wastewater System	District of Sooke, BC	Water & Wastewater	D-B-O	Operational	15-Apr-2004
Okotoks Water & Wastewater System	Town of Okotoks, AB	Water & Wastewater	D-B-O	Operational	01-May-2005
Bell Sensplex	City of Ottawa, ON		D-B-F-O	Operational	01-Mar-2004
Algonquin-Peel Energy From Waste Facility	Regional Municipality of Peel, ON	Water & Wastewater	D-B-Own-O	Expired	01-Jan-1992
Charleswood Bridge	City of Winnipeg, MB	Roads & Bridges	D-B-F-M	Operational	01-Jun-1995
Port Hardy Water & Wastewater Treatment System	District of Port Hardy, BC	Water & Wastewater	D-B-O	Operational	01-Jan-1999
Shenkman Arts Centre & Orleans Town Centre	City of Ottawa, ON		D-B-F-M-O	Operational	20-Jun-2007
Powerade Centre	City of Brampton, ON		D-B-F-O	Operational	15-Mar-1997
Brockton Water & Wastewater System	Municipality of Brockton, ON	Water & Wastewater	M-O	Operational	28-Jun-2006
Britannia Landfill Gas to Electricity Project	Regional Municipality of Peel, ON	Water & Wastewater	D-B-F-O	Operational	19-Sep-2002
SHOAL Centre	Town of Sidney, BC		D-B-F	Operational	01-Mar-2002
Waterloo Landfill Gas Power Project	Regional Municipality of Waterloo, ON	Water & Wastewater	D-B-F-M-O	Operational	01-Oct-1997
Prospera Place	City of Kelowna, BC		D-B-F-M-O	Operational	31-Dec-1998
Scarborough/Sheppard Maintenance and Storage Facility	Toronto Transit Commission, ON	Roads & Bridges	D-B-F-M	RFP	--
Brady Road Landfill Gas & Resource Recovery Project	City of Winnipeg, MB	Landfill & Recycling	D-B-F-O	RFP	--
Chief Peguis Trail Extension	City of Winnipeg, MB	Roads & Bridges	D-B-F-M	Operational	17-Sep-2010
Disraeli Bridges	City of Winnipeg, MB	Roads & Bridges	D-B-F-M	Under Construction	30-Mar-2010
Winnipeg Wastewater System	City of Winnipeg, MB	Water & Wastewater	Service Contract	Operational	20-Apr-2011

Continued on next page

Project Name	Owner	Sub Sector	Model	Current Stage	Financial Close Date Actual
Pan Am Athletes' Village	Toronto 2015, ON		D-B-F	Under Construction	12-Jan-2012
Pan Am Games Aquatics Centre, Field House & CSIO Project	University of Toronto, ON		D-B-F	Under Construction	03-Jul-2012
Sudbury Biosolids Management Facilities	City of Greater Sudbury, ON	Water & Wastewater	D-B-F-M-O	Under Construction	--
Ottawa LRT Project (Confederation Line)	City of Ottawa, ON	Public Transit	D-B-F-M	Under Construction	12-Feb-2013
Lac La Biche Wastewater Treatment Facility	County of Lac La Biche, AB	Water & Wastewater	D-B-M-O	Under Construction	27-Sep-2011
La Prairie Sports Complex	Commission scolaire des Grandes-Seigneuries, QE		D-B-F-O	RFP	--
City of Barrie P3 Transit Service Project	City of Barrie, ON	Public Transit	D-B-F-M-O	Shortlist	--
Waterloo Stage 1 LRT Project	Region of Waterloo, ON	Public Transit	D-B-F-M-O	Shortlist	--
Hamilton Biosolids Project	City of Hamilton, ON	Landfill & Recycling	D-B-F-M-O	RFEI	--
Regina Stadium	City of Regina, SK		D-B-F	Shortlist	--
Regina Wastewater Treatment Plant	City of Regina, SK	Water & Wastewater	D-B-F-M-O	RFQ	--
Edmonton LRT	City of Edmonton, AB	Public Transit	D-B-F-M-O	Pre-Tender	--
Biosolids Energy Centre	Capital Regional District, BC	Water & Wastewater	D-B-F-M-O	Pre-Tender	--
Mohawk 4-Ice Centre	City of Hamilton, ON		D-B-F-O	Operational	--
Surrey Biofuel Processing Facility Project	City of Surrey, BC	Landfill & Recycling	D-B-F-M-O	RFQ	--
Richcraft Sensplex	City of Ottawa, ON		D-B-F-M-O	Under Construction	--
Civic Operations Center Phase One (Snow Storage Decontamination Facility and Transit Facility)	City of Saskatoon, SK	Transportation - Other	D-B-F-M	Pre-Tender	--
Eglinton Crosstown LRT and Scarborough LRT Lines	Metrolinx, ON	Public Transit	D-B-F-M	RFQ	--
McLoughlin Point Wastewater Treatment Plant	Capital Regional District, BC	Water & Wastewater	D-B-F	RFQ	--

D=Design; **B**=Build; **F**=Finance; **O**=Operate; **M**=Maintain

Source: Canadian Council for Public Private Partnerships

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