

ASIA PACIFIC GATEWAY AND CORRIDOR: ECONOMIC EXPANSION POTENTIAL AND RISKS TO EXPANSION

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1. Introduction

This paper reports on a study carried out by CPCS for Canadian National (CN) in 2010. The purpose was to document: (1) the importance of the Asia-Pacific Gateway and Corridor (APGC) to the Canadian economy; (2) the economic expansion potential related to the APGC and its economic impact; and (3) to identify the possible risks to that future economic expansion potential. We present our main conclusions in the final section at the end of the paper.

2. Importance of the APGC to the Canadian Economy

The APGC is the transportation infrastructure that enables Canada's trade with the Asia-Pacific region. We therefore measured the APGC's importance in terms of merchandise trade, examining both the overall flows of merchandise trade and the key commodities moving via the APGC.

Trade can be measured in terms of volume (tonnes) and value (dollars). Data on both were examined.

Overall Trade Flows

Canada has experienced large and sustained increases in recent decades in the value of merchandise trade with Asia. From 1990 to 2008, imports from Asia grew fivefold, while exports nearly tripled.¹

In terms of volume, the APGC is most important as a conduit for exports. Over 1999-2007, the APGC handled between 40-45 percent of the volume of Canada's seaborne exports, and between 9-14 percent of the volume of Canada's seaborne imports. The APGC is also far more important in absolute terms as a conduit for exports. Exports via the APGC averaged 82 million tonnes per year over 1999-2007, compared to 12 million tonnes per year for imports.² This, of course, reflects the nature of the exports (resource based) versus imports (manufactured products).

Most of Canada's trade via the APGC is with Asia/Oceania. The APGC handled an average of 50 million tonnes per year in exports to Asia/Oceania over 1999-2007, which was almost 90 percent of the volume of Canada's seaborne exports to this region. Exports via the APGC to the U.S. Pacific region, South and Central America, and Europe averaged between 8-10 million tonnes per year in each case. This represented almost 100 percent of the volume of Canada's seaborne exports to the U.S. Pacific, about 60 percent of the volume of Canada's seaborne exports to South and Central America, and about 25-30 percent of Canada's seaborne exports to Europe.³

Trade Flows by Commodity

The main APGC imports, taking a snapshot in terms of value in 2009, include information and communications technology equipment (\$11.8 billion), automobiles and parts (\$7.6 billion), followed by goods such as toys and video games (\$2.5 billion), clothing (\$3.3 billion), furniture (\$1.2 billion) and cameras (\$1.2 billion).⁴ Most of these, automobiles being an exception, move in containers.

On the export side, in terms of value in 2009, coal is most important (\$4 billion), followed by rape or colza seeds (\$2.5 billion), meslin and wheat (\$1.2 billion), chemical wood pulp (\$1.2 billion) and potash (\$1.1 billion). Other key exports include ores, other forest products, pork, chemicals, and specialty crops.⁵

Examining export volumes, and taking the average annual tonnes over 2000-2008, we find the top ten export commodities include: coal (bituminous of 22.9 million and anthracite of 4.3 million); wheat (8.0 million); chemical wood pulp (5.7 million); sulphur (5.6 million); and potash (4.9 million). The remaining exports in the top ten include rape or canola seeds, lumber, logs and limestone.⁶

Examining import volumes by commodity, most notable is that these are far smaller than the export volumes. For example, the average annual tonnes of imports over 2000-2008 of fuel oil, the top import, is less than 900 thousand.⁷

3. APGC Economic Expansion Potential

Based on a review of the western Canada provincial government major project inventories and other research, we have identified planned investments totaling at least \$165 billion in projects that would generate, or in some cases enable, future export traffic via the APGC.⁸

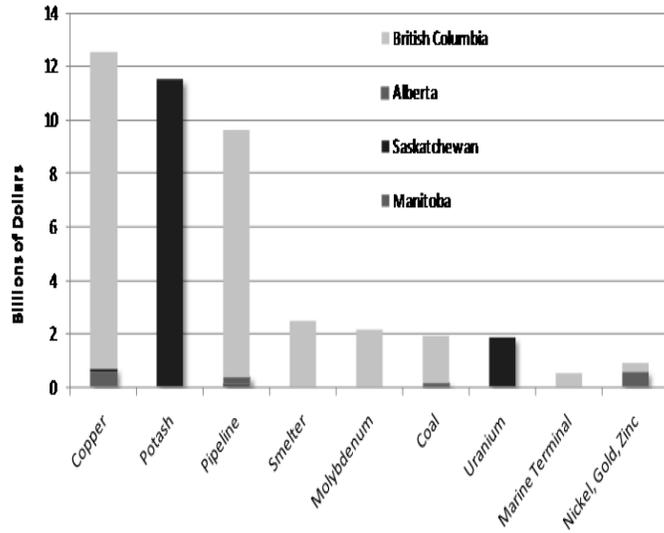
Indeed, this is not the entire potential. Although not accounted for here, there are other projects being contemplated. They are either on hold, or are being contemplated for the longer term. BHP Billiton, for example, has exploration rights to over 14,000km² in the Saskatchewan basin, and while the Jansen mine is BHP's most advanced project, BHP has others also under consideration.⁹ As well, our list includes only projects planned in western Canada, while there are some in the Northwest Territories and northern Ontario would also use the APGC.

By far the largest component of the planned investment is some \$120 billion in oil sands extraction, which would aim to export much of its product via the APGC. Pipeline projects, that would carry products to the west coast, total \$9.6 billion. There is also a potentially substantial role for rail in transporting petroleum products over the next several years as pipelines are being built, and in the longer term depending in part on how environmental concerns will affect pipeline construction.¹⁰

Apart from oil sands extraction, the top areas of planned investment that would rely on the APGC to export products, or enable APGC-related exports, are shown in Figure 1. In addition to pipelines, these include projects in copper mining at \$12.6 billion (often co-produced with other metals), and potash mining at \$11.5 billion. There are also significant amounts of investment planned in smelting (\$2.5 billion), molybdenum mining (\$2.2 billion), coal mining (\$1.9 billion), and uranium mining (\$1.9 billion).

While the ultimate start and completion dates are sensitive to market conditions and other factors, for example industry restructuring, the vast majority could be completed over the next 10 years.

Figure 1: Planned Investment in APGC-Related Projects (Excluding Oil Sands Extraction)



Source: CPCS analysis of provincial major project inventories.

4. Economic Impact of APGC Expansion Potential

One objective of this study has been to give an indication of the economic impact of the APGC's expansion potential. To do this, we have used simulation analysis to quantify the economic impact of a sample of (hypothetical) industry projects that are representative of those currently planned that would rely on the APGC. The model used for this purpose was the Interprovincial Input-Output model of Statistics Canada.¹¹

To illustrate the potential economic impact, simulations employing realistic project magnitudes, have been carried out for a selection of mining projects in key sectors (coal, copper and potash) as well as for a representative marine terminal expansion. The results are shown in Figure 2, which summarizes the impacts on Canada's GDP, full-time equivalent jobs (same as person-years of employment), and total government sector tax revenue (exclusive of any resource royalties).

Figure 2: Summary of Economic Impacts of Representative APGC-Related Projects⁽¹⁾

	Coal Mine Expansion in BC	Copper Mine Expansion in BC	Potash Mine Expansion in SK	Marine Terminal Expansion in BC
Construction Simulations⁽²⁾				
Cost of Construction	\$250 million	\$1 billion	\$1.5 billion	\$250 million
GDP Impact	\$90 million	\$358 million	\$514 million	\$255 million
Jobs Impact	1,172	4,685	6,505	3,001
Operations Simulations⁽³⁾				
Annual Mine Output Increase	\$250 million	\$300 million	\$400 million	
GDP Impact	\$256 million	\$299 million	\$407 million	Not applicable
Jobs Impact	1,038	1,238	1,746	
Tax Impact	\$3.4 million	\$3.5 million	\$4.3 million	
Cumulative Impacts⁽⁴⁾				
GDP Impact	\$6.5 billion	\$7.8 billion	\$20.9 billion	
Jobs Impact	27,122	35,635	93,805	Not applicable
Tax Impact	\$85.0 million	\$87.5 million	\$215.0 million	

- ⁽¹⁾ Impacts shown are for Canada as a whole. Jobs are full-time equivalent. Dollar figures are 2006 values.
- ⁽²⁾ Construction costs and impacts are totals relating to the entire construction period.
- ⁽³⁾ Output increases and impacts relate to a single year in the operating life of the mine.
- ⁽⁴⁾ Cumulative impacts are the totals over the construction and operating phases of the mines (25 year operating lives for coal and copper mines; 50 year operating life for potash mine).

Source: Simulations results from Statistics Canada Interprovincial Input-Output model.

The national effects that are summarized in Figure 2 tend, of course, to be concentrated in the province where the project is assumed to take place. Also, it is important to note that, because of the nature of the I-O model, the construction costs (construction “shocks”) and their impacts are totals that accrue over the period of construction, while the increases to mine output (output “shocks”) and their impacts relate to a single year in the operating life of the mines. The cumulative impacts shown are the totals of the impacts over the construction and operations phases of the projects.

The results of the representative mining projects indicate that, on average, each tranche of \$100 million in construction investment generates a total of \$1.6 billion in additional GDP in Canada and 6.9 thousand additional person-years of employment. However, the variance of the impacts is large, with the GDP impacts ranging between \$0.8-\$2.6 billion, and the employment impacts ranging between 3.6-10.8 thousand. Based on the marine terminal example, where it is only the construction phase that is simulated, we find that each \$100 million spent on construction generates approximately \$100 million in additional GDP and 1,200 in additional person-years of employment.

5. Risks to the APGC Economic Expansion Potential

Interviews with some 20 organizations, including customers of CN and others, provided the basis for this part of the study. Appendix A provides a list of the organizations consulted.

Because the interviewees are directly or closely involved with industry expansion projects, economic or transportation development, or development of the APGC itself, these consultations have been

indispensable to identifying the risks that could hinder the future economic expansion related to the APGC. The following is a synthesis of what we heard in the interviews.

The interviews led to identifying five main areas of risk. These are:

- **Obligation to consult and accommodate First Nations.** The Crown (federal and/or provincial governments) has a legal duty under section 35 of the Constitution to consult and accommodate First Nations affected by projects.¹² Project proponents inevitably become involved, in some cases having the process (but not the obligation) delegated to them by government.¹³ What is needed, however, is for the authorities to establish effective processes that would provide more clarity and certainty regarding developers' obligations and the costs and timelines involved in reaching agreements.
- **Environmental impact assessment and approval.** Assessments and approvals for major projects are lengthy, costly and often duplicative between federal and provincial governments. Provincial approvals alone take years for major projects. Projects may also trigger a federal review. Large projects can face extreme delays, e.g. five years for a greenfield oil sands mine. There have been actions to improve matters federally (Bill C-9) and in Alberta (Land Use Framework) but more is needed.
- **Public opposition to development in British Columbia.** Public opposition to development is strong in B.C. (e.g. opposition to port expansions, increased rail traffic, pipeline construction, increased oil tanker traffic), probably more so than in other provinces.¹⁴ It is generally believed that legislation or regulatory change is likely not sufficient to resolve the issues, and the first need is for leadership and public education. At one point, the federal government did issue an RFP for a "public engagement process" but this was inexplicably withdrawn.
- **Port labour regime.** Ever-present uncertainty regarding possible labour disruptions is a major concern of stakeholders. This has

also been recognized as a key issue by the Gateway Performance Table.¹⁵ As well, existing labour practices are seen as outmoded and impairing port efficiency. There have been proposals to address these issues. The British Columbia Maritime Employers Association's (BCMEA) recommendation for a local CIRB Panel was implemented. The BCMEA has also proposed a *Canada Labour Code* amendment providing for compulsory mediation and binding arbitration specifically in the APGC.

- **Infrastructure capacity provision.** Much has been invested in recent years in APGC infrastructure. Still, the need for more capacity (marine terminals, pipelines) to capture future export opportunities is a major issue, especially for bulk commodities where Canada has the potential to benefit from growing Asia-Pacific demands. A key challenge is ensuring that infrastructure is ready when the projects it supports are ready to start up. For the oil and gas industry, infrastructure to enable exports via the APGC is a key issue as the industry is seeking to diversify away from its total dependence on the U.S. market. For coal and potash, resolving the issues relating to Ridley Terminals is critical, including how will terminal expansion and development be financed, how will RTI be managed going forward, and how will the First Nations issues be addressed?

6. Conclusions

In October 2006, the federal government launched the Asia-Pacific Gateway and Corridor Initiative (APGCI) to, "...advance the capacity and efficiency of the Asia-Pacific Gateway and Corridor and Canada's ability to take advantage of it."¹⁶The specific objectives are to:

- Boost Canada's commerce with the Asia-Pacific region;
- Increase the APGC's share of North-American bound container imports from Asia; and
- Improve the efficiency and reliability of the APGC for Canadian and North American exports.¹⁷

Under the APGCI, infrastructure investments of \$3.5 billion have been announced, with the federal contribution to these totalling \$1.4 billion for projects in western Canada, including road and highway improvements, bridge expansions, rail/road grade separations, short sea shipping and a regional traffic management centre.

At this point, the federal funds are now fully committed, the APGCI is half way through its mandate, and the Government has outlined in broad terms a strategy for the remaining four years.¹⁸ The present study, however, suggests important lessons that should be part of the strategy so as to realize the full economic benefits of the APGC.

Up to now, the APGCI's principal focus has understandably been on capturing and managing the growth of containerized imports from Asia. However, in terms of volume, the APGC handles far more exports than imports, and the expansion potential for exports via the APGC is also large. This study has documented this expansion potential. **We have identified currently planned investments totaling at least \$165 billion in projects that would generate, or in some cases enable, future export traffic via the APGC.** This includes \$120 billion related to oil sands extraction, \$9.6 billion in pipelines to the west coast, \$12.6 billion in copper mining, \$11.5 billion in potash mining, and \$11.3 billion in other minerals, metals, smelting and marine terminal expansion.

We have also given an indication of the potential economic impact of these developments. In brief, **each tranche of \$100 million in project investment generates a life-cycle total \$1.6 billion in additional GDP and 6.9 thousand person-years of employment.**

At the same time, **we have also identified a number of risks to this economic expansion that need to be addressed**, related to:

- The obligation to consult and accommodate First Nations;
- The environmental impact assessment and approval process;
- The public opposition to development in British Columbia;
- The port labour regime; and
- Infrastructure capacity provision.

As part of the federal strategy going forward, emphasis is required along two lines. **First, in line with the objectives of the APGCI, there should be much greater emphasis on the large growth potential of Canada's resource-based exports and the infrastructure investments enabling these. Second, there needs to be much more urgency applied in recognizing and addressing the significant risks that threaten the realization of this export potential and its benefits.** In considering these challenges and their urgency, it is important to be cognizant that the APGC operates in an intensely competitive global supply chain environment.

Appendix: List of Organizations Interviewed

Organization	Commodity/Activity
Agrium Inc.	Potash
BC Ministry of Small Business, Technology & Economic Development	Government services
BC Ministry of Transportation (Pacific Gateway Branch)	Government services
BHP Billiton	Potash
Canadian Forest Products Ltd.	Lumber
Canpotex Ltd.	Potash
Canadian Association of Petroleum Producers	Industry association
Coal Association of Canada	Industry association
Daishowa-Marubeni International Ltd.	Pulp/caustic soda
EnCana Corporation	Petroleum products
First Coal Corporation	Metallurgical coal
Government of Alberta (Finance & Enterprise)	Government services
Government of Alberta (Transportation)	Government services
Ivanhoe Energy	Petroleum products
Japan Oil Sands Ltd.	Petroleum products
Nexen Marketing	Petroleum products
Potash Corporation	Potash
Teck Coal Ltd.	Metallurgical coal
West Fraser Timber Ltd.	Lumber
WESTAC	Advocacy
WorleyParsons	Port development (engineering)

Endnotes

¹Based on data from the Organization for Economic Cooperation and Development (OECD).

²Results in this paragraph based on data from Statistics Canada, *Shipping in Canada*, 1999-2007.

³Same source as cited in endnote 2

⁴Results based on Statistics Canada data retrieved from Industry Canada Trade Data Online.

⁵Same source as cited in endnote 4.

⁶Results based on analysis of Statistics Canada data of commodities loaded/unloaded at APGC ports.

⁷Same source as endnote 6.

⁸Three provinces, British Columbia, Alberta and Saskatchewan, publish major project inventories on a regular basis. Manitoba does not produce such a document; however, we consulted officials from the Government of Manitoba. We have also supplemented the work with research from other sources including information on major projects that may be found on company or project websites. The published provincial major project inventories may be found at:

British Columbia: http://www.bcstats.gov.bc.ca/pubs/pr_mproj.asp;

Alberta: <http://www.alberta-canada.com/about-alberta/inventory-of-major-projects.html>;

Saskatchewan: <http://www.publications.gov.sk.ca/details.cfm?p=22875>.

⁹BHP Billiton, *BHP Billiton in Saskatchewan: Bringing Opportunity Home* at <http://www.bhpbilliton.com/bb/ourBusinesses/diamondsSpecialtyProducts/potashDevelopment.jsp>.

¹⁰See, e.g., Vanderklippe, Nathan, (2011), *A 'pipeline on rails' promises to transform how oil is moved*, The Globe and Mail Report on Business, February 8, 2011, p. B1.

¹¹See Statistics Canada product main page at <http://www.statcan.gc.ca/bsolc/olc-cel/olc-cel?catno=15F0009XDB&lang=eng>.

¹²Julius Melnitzer, (2010), *The duty to consult*, National Post, August 18, 2010, p. FP11 provides an overview of the obligation and current situation.

¹³One model of accommodation gaining ground is where First Nations groups participate in projects, for example on a joint venture basis, with proponents. See Julius Melnitzer, (2010), *Massive change in aboriginal economy*, National Post, November 3, 2010, p. FP 12, and Cattaneo, Claudia, (2011), *Wooing the Aboriginals*, National Post, February 12, 2011, p. FP1.

¹⁴See, e.g., the website www.againstportexpansion.org. Krause, Vivian (2011), *Who is Organizing for Change?*, National Post, February 17, 2011, p. A14 raises questions around recent efforts of "no-tanker" supporters to affect the outcome of the upcoming B.C. Liberal party leadership choice.

¹⁵Asia Pacific Gateway Performance Table, (2010), Final Report to: Minister of Transport, Infrastructure and Communities and Minister Responsible for the Asia-Pacific Gateway and Corridor Initiative, June 2010.

¹⁶ Government of Canada, (2006), *Canada's Asia-Pacific Gateway and Corridor Initiative, TP14605*, p. 3.

¹⁷ *Ibid.*, p. 3.

¹⁸ Government of Canada, (2010), *Asia Pacific Gateway and Corridor Initiative Reaches a Milestone*, TP15044E, Ottawa.