

MEGAPROJECTS OUTLOOK – CANADA

January 2015

Projects include major private industrial investments (i.e.: resource extraction, pipelines, manufacturing sector), announced or under construction in Canada as of December 2014 and valued at \$1 billion or more. Selected projects have a precise location, a set value and timetable, and are at the construction or pre-construction stage.

256 BILLION \$ IN TROUBLED WATERS

Total value of industrial megaprojects in Canada at risk

Oil : a strategic pause, waiting for the storm to pass

\$144 billion worth of projects are being reconsidered. For many investors, however, the current outlook reflects only a temporary downturn and a third (by value) of all projects continue unhindered.

Natural gas: all sails out

During 2014, nearly \$60 billion worth of projects involving the transport of natural gas were announced, bringing the total value of these projects to over \$160 billion.

Ores and primary metals: dead calm

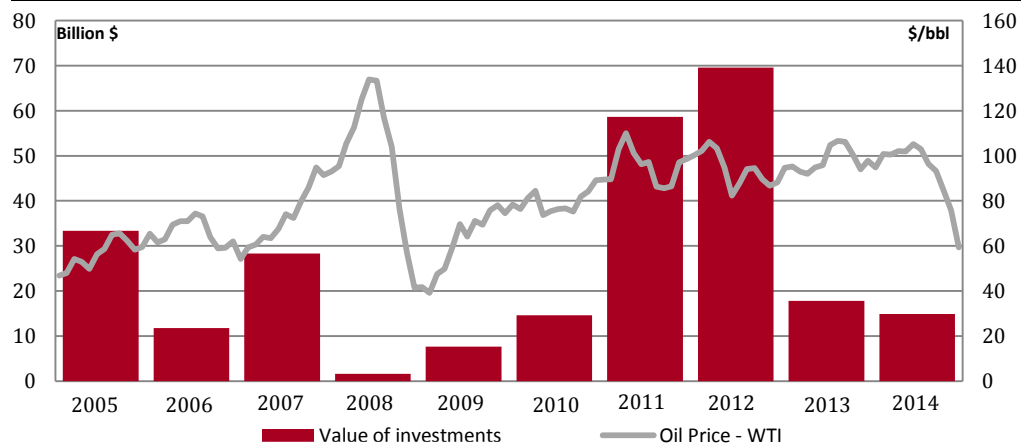
No new projects announced in 2014. Shut-downs remain exceptional.

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OIL

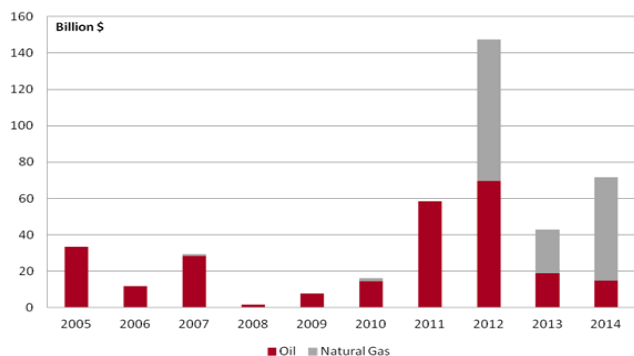
Over the last decade, oil megaprojects (extraction, refining and pipelines) accounted for over 45 percent of the total value of all industrial megaprojects announced in Canada. This interest in Canadian petroleum reflected a market with strongly positive price outlooks. Thus, more than \$175 billion worth of new projects were announced between 2010 and 2014 despite the high production costs of some extraction projects (sometimes ranging between \$70 and \$100 per barrel). The recent trend of declining prices and the uncertainty about its duration have inspired some investors to review their development plans. Nearly two-thirds of the value of ongoing projects is now considered fragile: \$144 billion worth of projects are likely to be delayed or abandoned in 2015. The projects that will continue to move forward are those that benefit from low production costs and strong financing structures, along with those that are already under construction or are backed by investors with integrated downstream operations.

Value of New Megaproject Announcements – Oil – Canada – 2005 to 2014



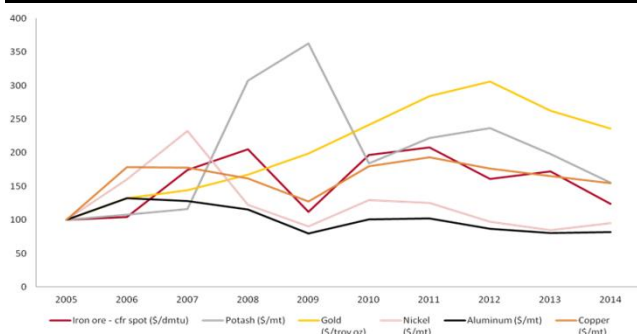
Source : E&B DATA. CAPEX-online. 2015.

Oil and Gas Megaproject Announcements by Product Canada – 2005 to 2014



Source : E&B DATA, CAPEX-online, 2015.

Major Canadian Minerals* Prices – Base 100=2005 2005 to 2014



Source : World Bank Commodity Price Data, as of January 2015.

*Megaprojects affected by these minerals account for, in value, approximately 80% of the total value of megaprojects related to the extraction and processing of minerals in Canada as of December 2014.

FRAGILITY INDICATOR

Represents the value of projects whose status is categorized as "Fragile", i.e. projects whose public information suggests that the project as initially announced could be reduced, delayed or even abandoned.

NATURAL GAS

Overall, most announced gas projects in Canada are moving forward. The substantial difference between price levels overseas (Asia and Europe) and those in North America has endured (as of December 2014) and continues to justify the interest of investors in new transmission and exports capacity from North America. Although intercontinental price differentials are likely to disappear over the long run, the overall outlook for natural gas remains favorable, given its ability to replace other energy sources (such as coal-fired power plant). While not a renewable energy source, natural gas is increasingly considered an attractive alternate energy source due to its relative abundance, its small carbon footprint and competitive current and forecasted prices. Over the medium and long terms, expect natural gas to acquire a larger share of the global energy mix.

Foreign investors (especially those from Japan, China and Malaysia) are active in Canada, ensuring access to supplies of natural gas. Foreign-owned companies now control two-thirds of the \$150 billion worth of gas-transportation projects underway in Canada.

MINERALS

The overall investment outlook is lacklustre, largely due to iron ore and potash—projects involving these two minerals account for more than 50 percent of the total value of all mining and mineral-processing projects in Canada. Indeed, close to \$45 billion worth of projects are postponed. Prices have fallen since 2012 and nothing suggests a recovery over the short or even medium terms. Although only a few projects have been formally abandoned, others are likely to remain on hold for lengthy periods of time. The gloom has also extended to other key metals in Canada: nickel and copper prices are now also declining, while aluminum prices continue to remain stagnant. On a positive note, most Canadian gold projects continue to move forward; gold prices may have declined from their peak in 2012, but remain well above the levels seen during most of the last decade.

Despite brutal conditions experienced by most investors, price levels remain tolerable for the projects with the lowest production costs. As per usual during down-cycles, one man's joy is another man's sorrow. Expect abandoned projects... and a flow of acquisitions.

¹The price of natural gas in Europe and Japan is three and four times higher, respectively, than it is in North America. Source: World Bank Commodity Price Data, as of January 2015.

TABLES AND NOTES

Ongoing Megaprojects - Status

Status	December 2014		December 2013	
	Value (\$M)	Breakdown of value	Value (\$M)	Breakdown of value
Active	298,537	54%	367,842	74%
Fragile	256,935	46%	129,260	26%
Total	555,472	100%	497,102	100%

New Megaprojects Announcements

Sector	Country of Origin			
	Canada (\$M)	Other (\$M)	Total (\$M)	Breakdown of value
Mining	0	0	0	0%
Oil & Gas	49,800	22,000	71,800	93%
Others	1,760	3,600	5,360	7%
Total	51,560	25,600	77,160	100%

Megaprojects - Status Updates

Development Stage of Megaprojects	Value (\$M)
Previously ongoing (December 2013)*	497,102
New in 2014	73,560
Abandoned in 2014	2,700
Completed in 2014	12,490
Total en cours	555,472

Ongoing Megaprojects by Sector

Sector	December 2014			December 2013		
	Value (\$M)	Breakdown of value	Fragility	Value (\$M)	Breakdown of value	Fragility
Minning - Total	126,287	23%	47%	135,077	27%	38%
Extraction	102,787	19%	49%	109,377	22%	38%
Processing	23,500	4%	36%	25,700	5%	41%
Oil & Gas - Total	414,825	75%	47%	349,425	70%	22%
Extraction	140,675	25%	65%	145,575	29%	24%
Processing	62,350	11%	49%	53,850	11%	23%
Transport	211,800	38%	34%	150,000	30%	20%
Others	14,360	3%	26%	12,600	3%	8%
Total	555,472	100%	46%	497,102	100%	26%

Ongoing Megaprojects by Region of Destination

Region	December 2014			December 2013		
	Value (\$M)	Breakdown of value	Fragility	Value (\$M)	Breakdown of value	Fragility
Western Canada	449,947	81%	49%	392,587	79%	25%
Northern Canada	10,075	2%	0%	10,815	2%	13%
Central Canada	65,400	12%	40%	63,650	13%	36%
Atlantic	30,050	5%	30%	30,050	6%	25%
Total	555,472	100%	46%	497,102	100%	26%

Ongoing Megaprojects by Region of Origin

Region	December 2014			December 2013		
	Value (\$M)	Breakdown of value	Fragility	Value (\$M)	Breakdown of value	Fragility
Canada	286,708	52%	43%	243,638	49%	29%
United-States	71,122	13%	32%	68,622	14%	19%
BRIC	26,590	5%	51%	26,590	5%	26%
Europe	104,900	19%	53%	106,100	21%	28%
Others	66,152	12%	62%	52,152	10%	18%
Total	555,472	100%	46%	497,102	100%	26%

MEGAPROJECTS

Projects with a total value of \$1 billion or more. Selected projects have a precise location, a set value and timetable, and are at the construction or pre-construction stage.

DEVELOPMENT STAGES

"New" megaprojects are those publicly announced in 2014 (may include projects previously abandoned, but being relaunched). "Previously ongoing" projects were ongoing as of December 31st 2013. Megaprojects labeled "abandoned" have been either announced as, or presumed abandoned, in 2014. "Completed" megaprojects have been completed since January 2014. "Ongoing" megaprojects include both new and previously ongoing projects not yet completed.

* Adjustments to projects' values (e.g., cost overruns) as of December 2014 have been made for projects announced in previous years.

MEGAPROJECT SECTORS

The mining sector includes extraction activities (metallic and non-metallic minerals) and processing, such as iron-ore pelletizing and aluminum smelting. The oil & gas sector includes extraction activities, processing (i.e. upgrading, refining) and transportation, which includes pipelines and liquefied natural-gas terminals. All other manufacturing sectors are included in "others."

MEGAPROJECT STATUS

"Active" projects are those under construction or in the process for obtaining government approval and financial structuring, while showing no sign of slow-down. Projects are categorized as "fragile" when available public information suggests that the project as initially announced could be reduced, delayed or even abandoned, due to financial factors (market conditions, financing) or regulatory concerns, or because the investor has remained silent about the project for an abnormally long period of time. Projects officially on hold are also included in this category.

FRAGILITY INDICATOR

Represents the value of a project categorized as fragile at the time of the analysis.

REGION OF DESTINATION

Western Canada includes British Columbia, Alberta, Saskatchewan and Manitoba. Northern Canada includes Yukon, Northwest Territories and Nunavut. Central Canada includes Ontario and Quebec. The Atlantic region includes Newfoundland and Labrador, New Brunswick, Nova Scotia and Prince Edward Island.

REGION OF ORIGIN

BRIC refers to Brazil, Russia, India and China. Europe includes all members of the European Union as of December 2014, as well as Norway and Switzerland. Countries such as Australia, South Africa and Malaysia are included within the "others" category.

OWNERSHIP

This study covers privately held projects, with the exception of projects announced in Canada by non-Canadian state owned enterprises.

E&B (Economic and Business) DATA is an independent economic-analysis company specializing in the industrial sector, particularly in heavy industry. Its clients include private investors, industry associations, governments and trade unions. Data come from CAPEX-online and are based on a continuous screening of public announcements concerning private capital investment projects of \$1 billion and over in Canada. For a purchase or a subscription to CAPEX-online, please contact info@ebdata.com.

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