

Natural Resources: Major Projects Planned and Under Construction – 2017 to 2027



Energy and Mines Ministers' Conference
St. Andrews by-the-Sea, New Brunswick
August 2017

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INTRODUCTION: THE MAJOR PROJECTS INVENTORY

Canada is fortunate to have one of the largest, most diverse natural resource endowments in the world, which positions the country favourably in meeting the world's demand for energy, minerals, metals and forest products. Canada has been successful in translating this tremendous resource advantage into a key pillar of the national, provincial and territorial economies. In 2016, the energy, minerals and metals, and forest sectors directly and indirectly supported over 1.7 million jobs across Canada and accounted for about 16% of the country's nominal gross domestic product.

Major natural resource projects are an important source of economic growth and job creation in all regions of Canada. Every year, in order to help monitor the levels of current and potential investment across the energy, mining and forest sectors, the Government of Canada collaborates with provinces and territories to update the Major Projects Inventory Report. Updates to the 2017 report were made between April and June of 2017 and reflect newly available information on project developments over the 12 months since June 2016¹. The Major Projects Inventory Report provides an overview of trends in data since a comparable scope and methodology for compilation of information was established in 2014.

To complement the public release of this report, project-level information is being shared through [Open Maps](#), a part of [Canada's Open Government](#) portal that is intended as a one-stop access to the Government of Canada's geospatial information.

SCOPE AND METHODOLOGY

The Major Projects Inventory Report captures information on major natural resource projects in Canada that are currently under construction or planned in the next 10 years. It includes projects that increase, extend or improve natural resources production (e.g., extraction and infrastructure projects, major processing facilities and large expansion projects). Exploration and general purpose infrastructure (e.g., multi-purpose highways) are excluded.

A capital expenditure threshold of \$50 million is used for energy and mining sector projects, while a threshold of \$20 million is used for electricity and forest sector projects. This year's Major Projects Inventory Report has a greater emphasis on clean energy and clean technology, and a new capital threshold of \$10 million was established for these projects in order to capture a greater share of investments in this rapidly growing area of the Canadian economy. Only projects that have been publicly announced with information available on their capital cost are included. Relatively smaller projects and investments, while recognized as important contributions to overall investment, are not included due to limited availability of data.

A variety of information sources are used to update the inventory, including databases in Natural Resources Canada, other federal, provincial and territorial government departments and agencies, company releases and publicly accessible websites. All information is available in the public domain.

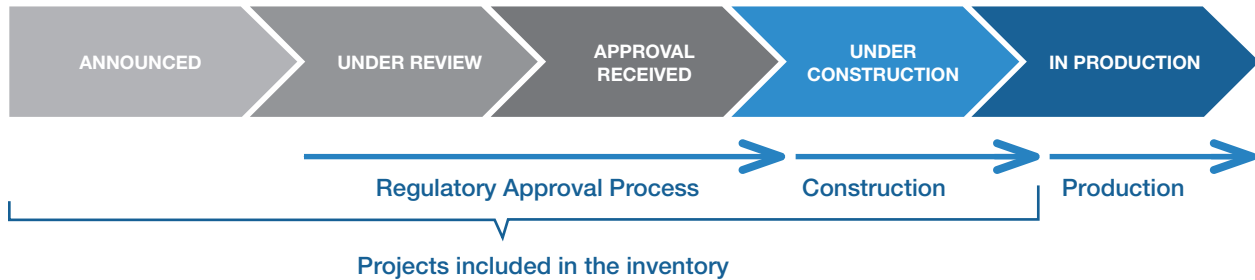
The inventory includes information relating to the value, timing and geographical location of projects. Projects included in the inventory are also divided according to their stage of development (Figure 1):

- **Announced:** planned projects that have been publicly announced, but that have not submitted applications for regulatory approvals;
- **Under Review:** planned projects that have submitted applications for regulatory approvals, but that are still under review;

¹ The report takes into account the cancellation of the Pacific Northwest LNG project announced on July 25th, 2017, due to the large scale of this project.

- **Approval Received:** planned projects that have received all major regulatory approvals (i.e., those required to start construction), but for which construction has not begun; and
- **Under Construction:** projects for which construction is underway.

Figure 1. Project Stages Included in the 2017 Major Projects Inventory



In order to highlight some of the key trends between annual updates, the Major Projects Inventory Report includes information on which projects have been added, completed, suspended, cancelled and removed:

- **Added projects:** projects that have been announced since the previous update or which have come within the scope for inclusion based on new availability of data.
- **Completed projects:** projects for which the construction phase has been completed or production has started.
- **Suspended projects:** projects (planned or under construction) that have been delayed for a long period or officially suspended by the proponents.
- **Cancelled projects:** projects (planned or under construction) that have been officially cancelled by the proponents.
- **Removed projects:** projects that are no longer within the inventory's scope due to newly available information (e.g., no longer meet the investment value threshold) or, while not officially suspended or cancelled, are considered too uncertain to include in the inventory.

OVERVIEW OF NATIONAL-LEVEL TRENDS AND ANALYSIS FOR 2017

As of the June 2017 update, there are a total of 471 projects representing \$684 billion in total capital costs. This compares to 421 projects in 2016, valued at \$691 billion and 487 projects in 2015, valued at \$711 billion. As of the June 2017 update, 126 projects were added (\$58 billion) and 50 projects were completed and started production (\$33 billion). While completed projects are removed from inventory totals, they represent tangible benefits to the Canadian economy through production and operational workforces. In addition, 13 projects were suspended or cancelled (\$41 billion), which is a decrease over the 62 projects suspended or cancelled (\$78 billion) during the 2016 update. Since 2015, 194 projects have been completed and are in production (\$111 billion).

Total projects and changes between 2015 and 2017

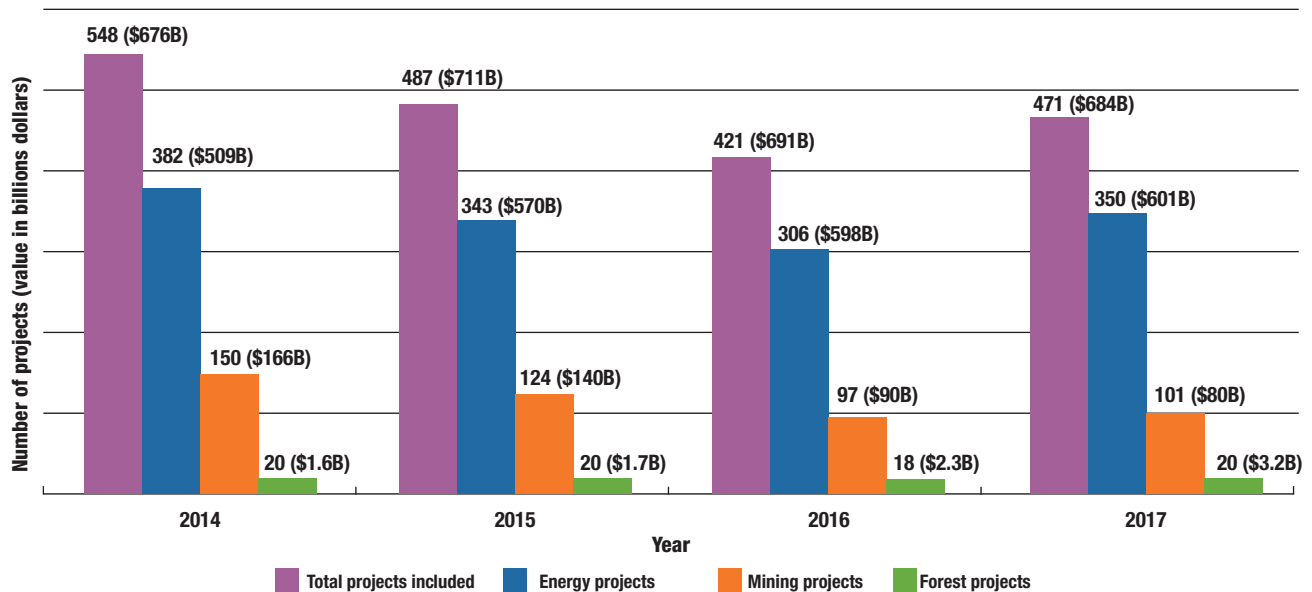
Changes from previous year	2015	2016	2017*
Added	109 projects (\$160B)	85 projects (\$63B)	126 projects (\$58B)
Completed	88 projects (\$53B)	56 projects (\$25B)	50 projects (\$33B)
Suspended/Cancelled	51 projects (\$48B)	62 projects (\$78B)	13 projects (\$41B)
Removed	31 projects (\$28B)	33 projects (\$20B)	13 projects (\$10B)
Total Projects Included¹	487 projects (\$711B)	421 projects(\$691B)	471 projects (\$684B)

¹ Revisions to cost estimates of existing projects also influence changes in total capital cost between years.

*In 2017, as a result of the new \$10-million threshold for clean technology projects, 23 additional projects (valued at \$347 million) are included.

Between 2014 and 2017, the total number of projects declined from 548 to 471, while the total value of projects increased from \$676 billion to \$684 billion. The energy sector displayed the same trend over this time period. For the mining sector, both the number of projects and the dollar value has fallen, while for the forest sector the number has remained steady but the value of projects doubled in 2017.

Figure 2. Total Projects Included from 2014 to 2017

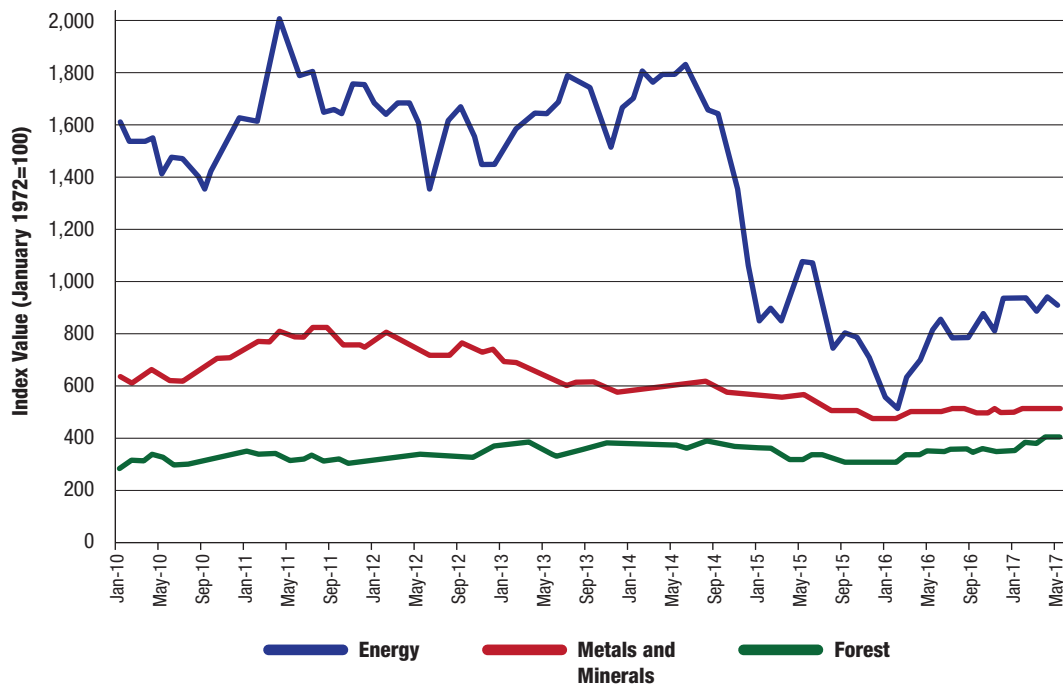


ECONOMIC CONTEXT

Canadian natural resource producers are price takers and are susceptible to market cycles and price fluctuations. As such, changes in the number, value and status of major resource projects over the years are often the result of a wide range of external economic factors.

In 2016, lower commodity prices caused energy and mining firms in Canada (and globally) to announce reduced capital investment and project delays and cancellations. The recent upswing in overall commodity prices and many indicators suggest that investment in these sectors has rebounded, which has led many resource companies to announce increases in their capital spending plans. According to Statistics Canada's *Capital and Repairs Expenditures Survey* released in February 2017, expenditure intentions in the oil and gas sector for 2017 show an increase of two percent over 2016 estimates. This growth compares with forecasts from the Bank of Canada's April 2017 *Monetary Policy Report*, which suggests that investment in the oil and gas sector is projected to expand moderately, after contracting for two years, as indicated by increased rig activity and reported capital expenditure plans. However, according to Statistics Canada data, these increases may be offset by lower investment intentions in other resource industries.

Figure 3. Commodity Price Indexes, 2010 to Present (Bank of Canada)



Note: The energy index reflects production and prices of Crude Oil [WTI, Brent, Western Canada Crude], Natural Gas, Coal. The metals and minerals index includes Potash, Aluminum, Gold, Nickel, Iron, Copper, Silver, Zinc and Lead. The forest index includes lumber, pulp and newsprint.

The specific trends at play vary between sectors. For example:

- In February 2016, West Texas Intermediate (WTI) oil bottomed out at just US\$26 per barrel. As shown in Figure 3, energy prices have subsequently risen substantially. Factors behind the increase in crude oil prices include production cuts of 1.8 million barrels per day in 2017 by OPEC and non-OPEC countries, including Russia. The production cuts have reduced global crude supply and inventories and pushed oil prices up. Another factor that has had an impact on crude oil prices is a drop in investment, following a two-year oil price collapse, which will impact new supply. In 2017, investment spending in the oil (non-oil sands) and gas sector is growing again, given renewed confidence that energy prices could remain at higher levels than in the recent past.
- Regarding natural gas, growth in Asian demand has slowed at a time when new projects are coming online worldwide. This has led to what many analysts consider will be an oversupplied market until the early 2020s. As a result, some stakeholders are reviewing their investment decisions, including for some liquefied natural gas (LNG) terminals. Notwithstanding this difficult investment environment, interest in Canadian LNG projects remains strong and active, given the time and resources required to review, construct and put LNG facilities into operation. Canada is well placed to meet additional demand in the early 2020s.
- For the minerals and metals sector, China is the dominant consumer, accounting for one-half of global consumption. However, China's economic growth is decelerating. In 2016, growth in China reached 6.7 percent, the slowest pace since 1990. Looking ahead, the composition of China's economy will shift from minerals-intensive industrial production to the service sector – further reducing growth in demand for minerals and metals. Minerals and metals prices are expected to be mixed over the balance of this decade. Base metal (e.g., copper, nickel and zinc) prices should rally due to supply side constraints. Gold prices are likely to be elevated but volatile – reflecting economic and geopolitical uncertainty. Potash prices are projected to find a floor but remain weak by recent historical standards. Stagnant consumption and ample low-cost supply of metallurgical coal and iron ore should continue, placing downward pressure on prices.
- In the forest sector, most forest product prices are in an upcycle, helped by steady growth in the U.S. economy and a weaker Canadian dollar. New projects are driven by wood pellet production. However, downside risks for future major projects investment and demand exist as a result of global economic uncertainty and volatility in lumber prices during the Canada-U.S. softwood lumber dispute.

OVERVIEW OF SECTOR AND PROJECT ANALYSIS FOR 2017

Energy Projects

As of June 2017, there are 350 energy projects valued at \$601 billion. This compares with 306 projects valued at \$598 billion in 2016 and 343 projects valued at \$570 billion in 2015. In 2017, the increase in total value was due to the addition of 92 projects, the total value of these new projects being \$42 billion. The announcement of the \$10-billion May River project in Alberta an oil and gas project owned by MEG Energy Corporation was the largest addition.

Energy projects cover a wide array of sub-sectors, including those in oil and gas (e.g., oil sands, off-shore, LNG, export terminals, storage facilities, pipelines) and electricity generation and transmission (e.g., nuclear, renewables, power lines). Oil and gas-related projects constitute roughly 80 percent of the total value of energy projects in 2017, while electricity generation and transmission projects account for roughly 19 percent of the total.

	2015	2016	2017
Total energy projects	343 projects (\$570B)	306 projects (\$598B)	350 projects (\$601B)
Oil and Gas	155 projects (\$456B)	147 projects (\$485B)	143 projects (\$478B)
Electricity	184 projects (\$113B)	155 projects (\$108B)	197 projects (\$117B)
Other¹	4 projects (\$1B)	4 projects (\$5B)	10 projects (\$5B)

¹ Other primarily includes biomass/biofuel production activities. Totals may not add up due to rounding.

Oil Sands

The number and value of oil sands-related projects (e.g., in situ, upgrading and refining) has increased compared with last year. As of the June 2017 update, there were 53 oil sands-related projects, representing an estimated \$168 billion in capital expenditure. This compares with 47 projects worth \$148 billion in 2016 and 62 projects worth \$165 billion in 2015. Of the net increase of six projects between 2016 and 2017, seven projects were completed (\$11 billion) all in Alberta. Thirteen new projects were added to the inventory this year valued at \$24 billion. Of these projects, four were located in Saskatchewan and nine in Alberta. This activity largely explains the net \$20-billion increase in the total value of existing oil sands projects in 2017.

	2015	2016	2017*
Oil Sands projects¹	62 projects (\$165B)	47 projects (\$148B)	53 projects (\$168B)

¹ Excludes pipeline projects

Natural Gas

There are 59 natural gas-related projects (e.g., natural gas pipelines, export facilities and gas-fired generators) across Canada, representing an estimated \$193 billion in capital costs. The drop in value of natural gas-related projects between 2016 and 2017 occurs as two large LNG projects both in British Columbia were cancelled: The Prince Rupert LNG project valued at \$16 billion cancelled by Royal Dutch Shell in March 2017, and the \$11.4 billion Pacific NorthWest LNG project cancelled by Petronas and its partners on July 25, 2017. In comparison, between 2015 and 2016, the total value of natural gas projects increased from \$215 billion to \$217 billion, largely due to the announcement of several LNG projects, which accounted for an additional \$2 billion. This year, two significant new natural gas projects in Alberta were announced, a \$4.2-billion project owned by Pembina Pipeline Corporation and Petrochemical Industries Company and a \$1.85-billion project owned by Inter Pipeline.

	2015	2016	2017*
Natural gas projects	65 projects (\$215B)	68 projects (\$217B)	59 projects (\$193B)

Mining Projects

Current and potential investment in major mining-related projects (e.g., mine constructions, redevelopments, expansions and processing facilities) has dropped since 2015. As of the June 2017 update, there are 101 projects planned or in construction across Canada, representing about \$80 billion in estimated capital cost

expenditures. This compares with 97 projects worth \$90 billion in 2016 and 124 projects worth \$140 billion in 2015. Of the net increase of four projects between 2016 and 2017, 18 projects worth \$4.7 billion were added to the inventory. Also, seven projects worth \$13 billion were completed, while seven projects worth \$12 billion were suspended.

As of June 2017, of the mining-related projects, Saskatchewan accounts for 27 percent of the total value, British Columbia accounts for 26 percent and Quebec 17 percent of the total value. The remaining share of total value is spread across all jurisdictions, with the exception of Prince Edward Island, which has no mining projects planned or in construction.

	2015	2016	2017
Total mining-related projects	124 projects (\$140B)	97 projects (\$90B)	101 projects (\$80B)
Mines – Metals	85 projects (\$91B)	61 projects (\$49B)	65 projects (\$48B)
Mines – Non-metals	20 projects (\$29B)	20 projects (\$24B)	21 projects (\$26B)
Mines – Coal	12 projects (\$7B)	9 projects (\$5B)	6 projects (\$3B)
Other¹	7 projects (\$13B)	7 projects (\$12B)	9 projects (\$3B)

¹ Other includes processing plants, smelters, refineries and export terminals.

Forest Projects

The number of forest-related major projects (e.g., lumber, pulp and paper, biofuel production) has remained relatively steady since 2015. Meanwhile, the total value of projects has increased, particularly in 2017 with the addition of 12 new projects valued at \$1.8 billion. As of the June 2017 update, there are 20 major forest projects across Canada, representing about \$3.2 billion in estimated capital cost expenditures. This compares with 18 projects worth \$2.3 billion in 2016 and 20 projects worth \$1.7 billion in 2015.

With 12 projects, Quebec accounts for 75 percent of total forest-related capital cost expenditures. The remaining projects and capital expenditures are spread among New Brunswick, Saskatchewan, Ontario, Alberta and British Columbia.

	2015	2016	2017*
Total forest-related projects	20 projects (\$1.7B)	18 projects (\$2.3B)	20 projects (\$3.2B)

Special Feature: Clean Technology

Clean technologies are a vibrant, rapidly growing area of the Canadian economy and will play a fundamental role in Canada's transition to a low-carbon economy. In addition to reducing the environmental impact of the natural resource sectors, innovation and the use of clean technology is critical to enhance productivity and competitiveness. Resource companies across the country are investing in clean technology solutions, and these investments are expected to continue to increase. This year, in order to capture a greater share of these investments, a new minimum threshold of \$10 million was introduced for clean technology projects.

Clean technology projects included in the Major Projects Inventory Report are essentially renewable and non-emitting energy projects in the energy and forest sectors. While not necessarily captured here, several mining and oil and gas projects include significant clean technology components and will contribute to reducing the overall environmental impact of Canada's natural resource sectors. It is also important to note that the Major Projects Inventory Report only captures clean technology investment taking place in the context of natural resources and does not include investments made in other sectors of the economy.

There were 172 clean technology projects, including renewable energy (hydro, wind, solar, tidal, geothermal), nuclear, biofuels/biomass and carbon capture and storage, with a total value of \$107.5 billion. These projects are included in the above sections within the energy or forest sectors' totals and are not new additions. As shown in the table below, hydroelectric projects represent the majority of clean technology projects at 80, valued at \$49.7 billion, followed by wind energy projects (42 projects valued at \$10.6 billion).

	2017*
Total clean technology projects	172 projects (\$107.5B)
Hydro	80 projects (\$49.7B)
Wind	42 projects (\$10.6B)
Biomass/Biofuels	31 projects (\$8.2B)
Solar	9 project (\$0.6B)
Nuclear	4 projects (\$28.5B)
Carbon Capture and Storage	2 projects (\$9.1B)
Geothermal	2 projects (\$0.4B)
Tidal	1 project (\$0.1B)
Other (Renewables)*	1 project (\$0.2B)

*Other (Renewables) includes one project based on a mix of all renewable energy sources (hydro, biomass, wind and solar).

Note: Although this is a new section of the report, clean technology projects were included in previous years as they fall within the energy and forest sectors; however, this year we have tracked them to provide a clear overview of these projects. Also, 23 new clean technology projects that fall within the \$10–\$20 million range were added this year.

While clean technology investments are taking place in the majority of provinces and territories, British Columbia, Alberta, Ontario and Quebec account for 85 percent of the number of clean technology projects. There are two carbon capture and storage projects (both located in Alberta), and their total value is

\$9.1 billion. Similarly, the four nuclear projects located in Ontario (\$28.5 billion) account for a significant portion of clean technology investment. Although all efforts have been made to capture major clean technology investments across Canada, these results are not necessarily fully representative of the level of clean technology investment activity in certain regions. For example, some significant investment in smaller jurisdictions may not have been captured as a result of the \$10-million threshold used for clean technology projects.

The number of clean technology projects that are currently under construction is 54, valued at \$66 billion, which is 31 percent of the total number of clean technology projects, a proportion that is comparable to the average for all projects included in the inventory.

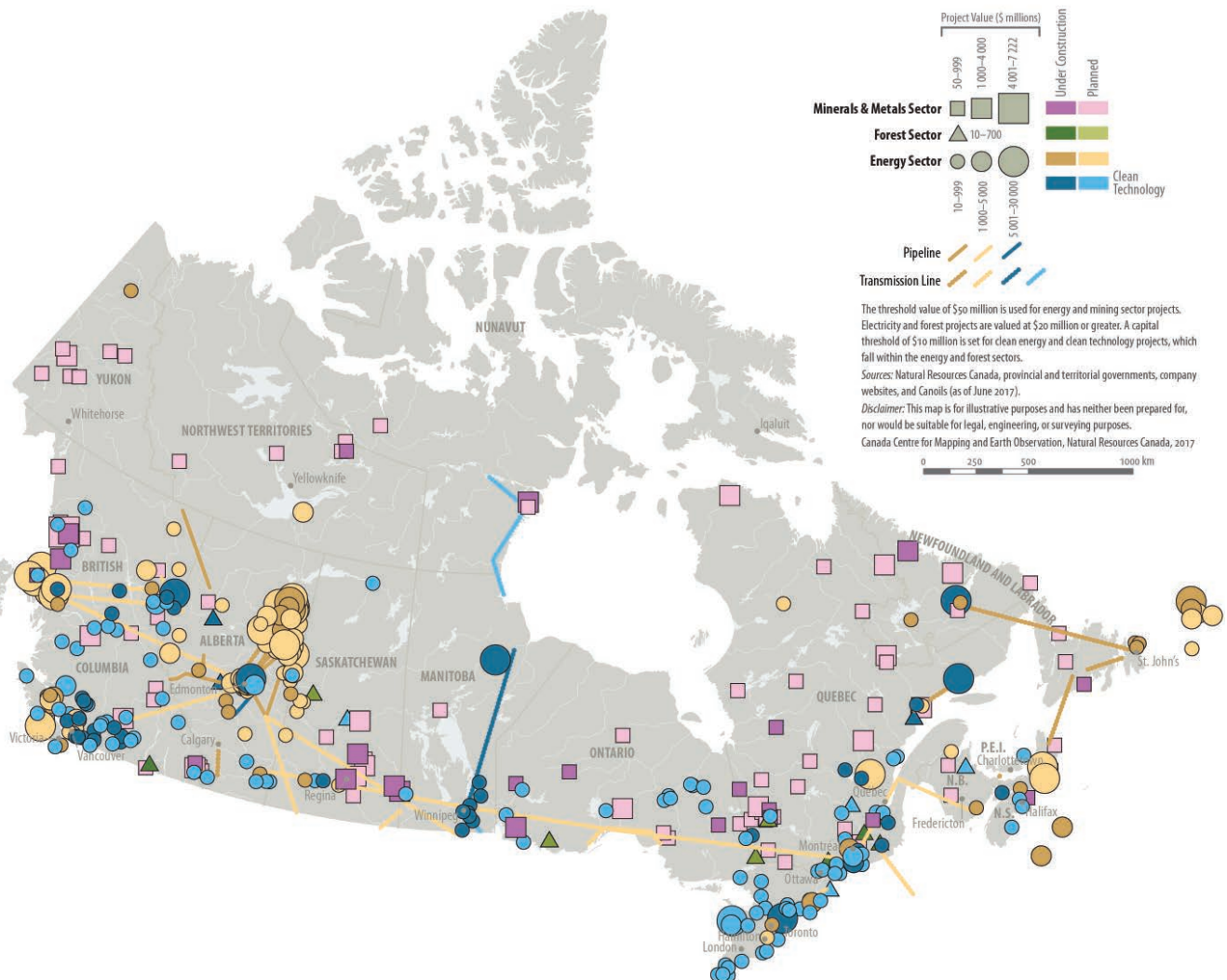
Efforts will be made in future updates of the Major Projects Inventory Report to capture clean technology projects in the natural resource sectors, including more analysis on clean technology investment trends.

MAJOR NATURAL RESOURCES PROJECTS

Planned and Under Construction, 2017–2027



Canada



1 Highlights

- As of June 2017, there are 471 projects currently under construction or planned in Canada over the next 10 years, representing \$684 billion in value.
- In total, the 2017 Major Projects Inventory has 50 more projects than the 2016 report. Since the 2016 report:
 - 50 projects valued at \$33 billion have been completed and are in production;
 - 26 have been suspended, cancelled or removed; and,
 - 126 projects have been added.
- The total value of major projects in the inventory decreased from \$691 billion in 2016 to \$684 billion in 2017. The addition of 126 projects of which 72 were identified as clean technology projects was offset by the cancellation of two large LNG projects in 2017 valued at \$16 billion and \$11.4 billion each.
- In terms of value, energy projects account for 88 percent of total major projects. Comparatively, major projects in the minerals and metals and forest sectors account for 11.5 percent and 0.5 percent, respectively.

2 Summary Table

Status	Energy		Minerals and Metals		Forest		Total	
	#	\$B	#	\$B	#	\$B	#	\$B
Planned	231	\$452	79	\$56.5	9	\$2.2	319	\$510
Announced	34	\$84	17	\$6.3	3	\$0.9	54	\$91
Under Review	64	\$181	37	\$30	2	\$0.7	103	\$211
Approval Received	52	\$152	10	\$13	0	\$0	62	\$165
Planned – Status Unknown	81	\$35	15	\$7.2	4	\$0.6	100	\$43
Under Construction	119	\$149	22	\$24	11	\$0.9	152	\$174
Total	350	\$601	101	\$80.5	20	\$3.1	471	\$684

Source: Major Projects Inventory, as of June 2017.

Note: Totals may not add up due to rounding.

2015–17 Project Trends Status

Status	2015		2016		2017	
	#	\$B	#	\$B	#	\$B
Planned	342	\$534	272	\$505	319	\$510
Under Construction	145	\$178	149	\$186	152	\$174
Total	487	\$711	421	\$691	471	\$684

Source: Major Projects Inventory, as of June 2017.

Note: Totals may not add up due to rounding.

4 Projects by Province/Territory

Provinces and Territories	Energy		Minerals and Metals		Forest		Total	
	#	\$B	#	\$B	#	\$B	#	\$B
British Columbia	100	\$219	21	\$21	1	\$0.05	122	\$240
Alberta	103	\$206	2	\$0.7	2	\$0.1	107	\$207
Saskatchewan	9	\$4	10	\$22	2	\$0.5	21	\$27
Manitoba	12	\$15	1	\$0.6	0	0	13	\$15
Ontario	53	\$38	10	\$5.5	2	\$0.1	65	\$44
Quebec	28	\$23	27	\$13.6	12	\$2.4	67	\$40
New Brunswick	4	\$0.7	2	\$0.8	1	\$0.05	7	\$1.6
Nova Scotia	11	\$22	3	\$1	0	\$0	14	\$23
Prince Edward Island	2	\$0.2	0	\$0	0	\$0	2	\$0.2
Newfoundland and Labrador	16	\$32	10	\$6.5	0	\$0	26	\$39
Yukon	1	\$0.1	7	\$4.4	0	\$0	8	\$4.5
Northwest Territories	1	\$2	5	\$2	0	\$0	6	\$4.5
Nunavut	0	\$0	3	\$2	0	\$0	3	\$2
Multi-jurisdictional	10	\$39	0	\$0	0	\$0	10	\$39

Source: Major Projects Inventory, as of June 2017.

Note: Totals may not add up due to rounding.

MAJOR NATURAL RESOURCES PROJECTS

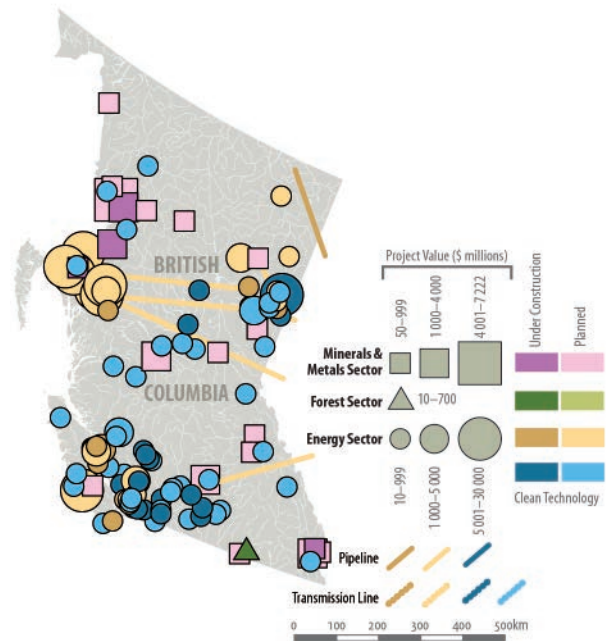
Planned and Under Construction, 2017–2027



British Columbia

1 Highlights

- A total of 122 projects are currently under construction in B.C. or planned over the next 10 years, representing \$240 billion in investment.
- In terms of value, energy projects account for close to 91 percent of major projects investment in B.C., as well as 81 percent of the total number of projects.
- In 2017, there were 63 clean technology projects included in the Major Projects Inventory, valued at \$25.2 billion.
- These included: 36 hydro projects valued at \$17.7 billion, two geothermal projects valued at \$430 million, 13 wind projects at \$3.5 billion and 12 biomass projects at \$3.4 billion.



2 Summary Table

Status	Energy		Minerals and Metals		Forest		Total	
	#	\$B	#	\$B	#	\$B	#	\$B
Planned	67	\$203.8	17	\$17.5	0	\$0	84	\$222
Announced	16	\$55.2	1	\$0.1	0	\$0	17	\$55
Under Review	25	\$92.8	10	\$7.2	0	\$0	35	\$100
Approval Received	11	\$51.6	3	\$9.0	0	\$0	14	\$61
Planned – Status Unknown	15	\$4.2	3	\$1.2	0	\$0	18	\$5
Under Construction	33	\$14.7	4	\$3.1	1	\$0.05	38	\$18
Total	100	\$219	21	\$21	1	\$0.05	122	\$240

Source: Major Projects Inventory, as of June 2017.

Note: Totals may not add up due to rounding.

3 2015–17 Project Trends

Status	2015		2016		2017	
	#	\$B	#	\$B	#	\$B
Planned	113	\$234	84	\$249	84	\$222
Under Construction	46	\$14	43	\$22	38	\$18
Total	159	\$248	127	\$271	122	\$240

Source: Major Projects Inventory, as of June 2017.

Note: Totals may not add up due to rounding.

MAJOR NATURAL RESOURCES PROJECTS

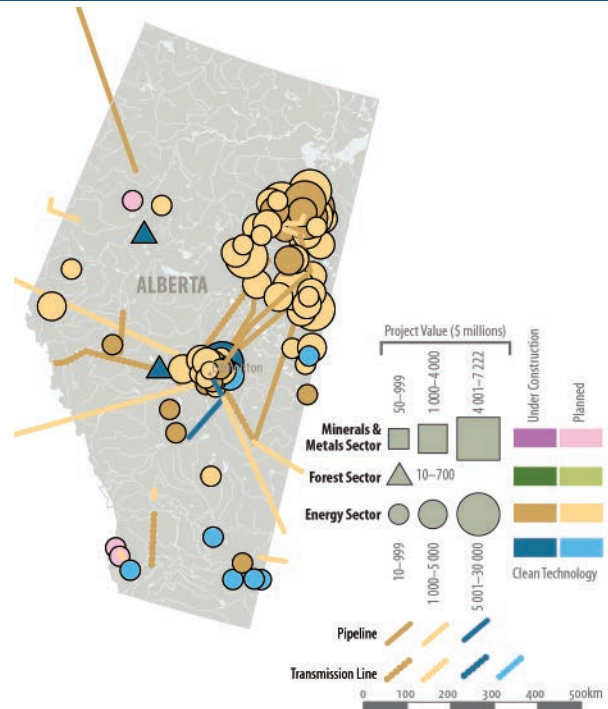
Planned and Under Construction, 2017–2027



Alberta

1 Highlights

- A total of 107 projects are currently under construction in Alberta or planned over the next 10 years, representing \$207 billion in investment.
- In terms of value, energy projects account for 99.7 percent of major projects investment in Alberta and with 103 projects, 97 percent of the number of total projects.
- In 2017, there were 11 clean energy projects valued at \$12.3 billion.
- These included: two carbon capture and storage projects valued at \$9.1 billion, four wind projects at \$1.2 billion, one solar project at \$10 million and four biomass projects at \$2 billion.



2 Summary Table

Status	Energy		Minerals and Metals		Forest		Total	
	#	\$B	#	\$B	#	\$B	#	\$B
Planned	71	\$147.5	2	\$0.67	0	\$0	73	\$148
Announced	14	\$21.3	0	\$0	0	\$0	14	\$21
Under Review	18	\$53.7	1	\$0.37	0	\$0	19	\$54
Approval Received	32	\$70.3	0	\$0	0	\$0	32	\$70
Planned – Status Unknown	7	\$2.2	1	\$0.3	0	\$0	8	\$2.6
Under Construction	32	\$58.5	0	\$0	2	\$0.11	34	\$59
Total	103	\$206	2	\$0.67	2	\$0.11	107	\$207

Source: Major Projects Inventory, as of June 2017.

Note: Totals may not add up due to rounding.

3 2015–17 Project Trends

Status	2015		2016		2017	
	#	\$B	#	\$B	#	\$B
Planned	97	\$136	73	\$114	73	\$148
Under Construction	36	\$68	45	\$74	34	\$59
Total	133	\$204	118	\$187	107	\$207

Source: Major Projects Inventory, as of June 2017.

Note: Totals may not add up due to rounding.

MAJOR NATURAL RESOURCES PROJECTS

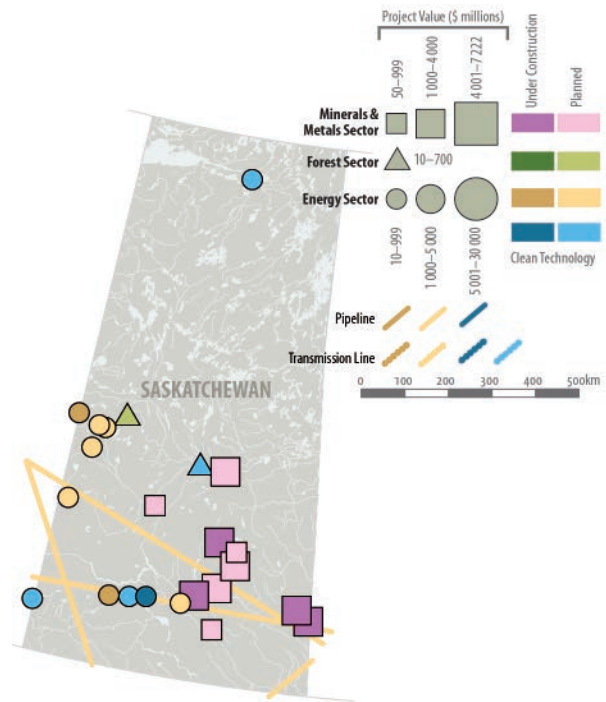
Planned and Under Construction, 2017–2027



Saskatchewan

1 Highlights

- A total of 21 projects are currently under construction in Saskatchewan or planned over the next 10 years, representing \$27 billion in investment.
- In terms of value, mining projects account for 84 percent of major projects investment in Saskatchewan and 48 percent of the total number of projects.
- In 2017, there were four clean technology projects valued at \$1.6 billion.
- These included: one hydro project valued at \$630 million, two wind projects at \$710 million and one biomass project at \$300 million.



2 Summary Table

Status	Energy		Minerals and Metals		Forest		Total	
	#	\$B	#	\$B	#	\$B	#	\$B
Planned	6	\$3	6	\$9.6	2	\$0.5	14	\$13
Announced	1	\$0.4	0	\$0	0	\$0	1	\$0.4
Under Review	3	\$1	5	\$9.5	0	\$0	8	\$11
Approval Received	1	\$0.6	1	\$0.08	0	\$0	2	\$0.7
Planned – Status Unknown	1	\$0.7	0	\$0	2	\$0.5	3	\$1
Under Construction	3	\$1.2	4	\$13	0	\$0	7	\$14
Total	9	\$4	10	\$22	2	\$0.5	21	\$27

Source: Major Projects Inventory, as of June 2017.

Note: Totals may not add up due to rounding.

3 2015–17 Project Trends

Status	2015		2016		2017	
	#	\$B	#	\$B	#	\$B
Planned	11	\$13	9	\$9	14	\$13
Under Construction	7	\$14	5	\$11	7	\$14
Total	18	\$27	14	\$20	21	\$27

Source: Major Projects Inventory, as of June 2017.

Note: Totals may not add up due to rounding.

MAJOR NATURAL RESOURCES PROJECTS

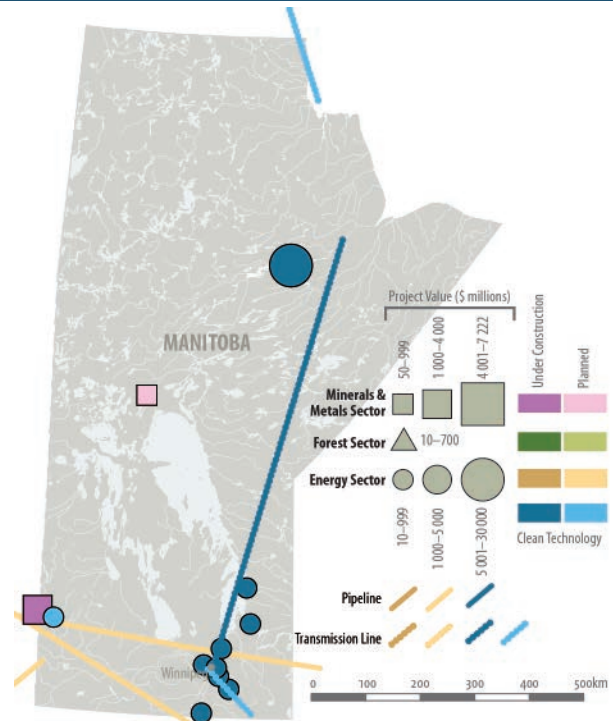
Planned and Under Construction, 2017–2027



Manitoba

1 Highlights

- A total of 13 projects are currently under construction in Manitoba or planned over the next 10 years, representing \$15 billion in investment.
- In terms of value, energy projects account for 96 percent of major projects investment in Manitoba and 92 percent of the total number of projects.
- In 2017, there were 12 clean technology projects valued at \$14.8 billion, all of them hydro projects.



2 Summary Table

Status	Energy		Minerals and Metals		Forest		Total	
	#	\$B	#	\$B	#	\$B	#	\$B
Planned	2	\$0.5	1	\$0.6	0	\$0	3	\$1
Announced	0	\$0	0	\$0	0	\$0	0	\$0
Under Review	2	\$0.5	0	\$0	0	\$0	2	\$0.5
Approval Received	0	\$0	0	\$0	0	\$0	0	\$0
Planned – Status Unknown	0	\$0	1	\$0.6	0	\$0	1	\$0.6
Under Construction	10	\$14	0	\$0	0	\$0	10	\$14
Total	12	\$15	1	\$0.6	0	\$0	13	\$15

Source: Major Projects Inventory, as of June 2017.

Note: Totals may not add up due to rounding.

2015–17 Project Trends

Status	2015		2016		2017	
	#	\$B	#	\$B	#	\$B
Planned	3	\$1	2	\$1	3	\$1
Under Construction	3	\$10	2	\$10	10	\$14
Total	6	\$11	4	\$11	13	\$15

Source: Major Projects Inventory, as of June 2017.

Note: Totals may not add up due to rounding.

MAJOR NATURAL RESOURCES PROJECTS

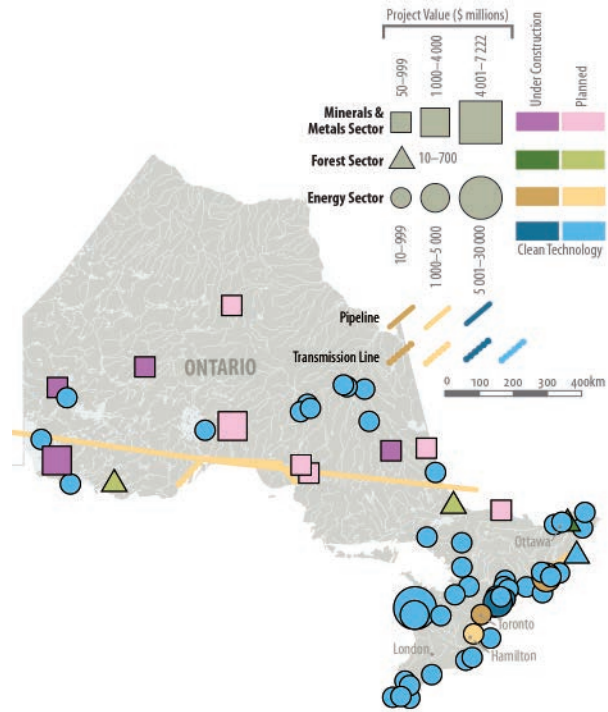
Planned and Under Construction, 2017–2027



Ontario

1 Highlights

- A total of 65 projects are currently under construction in Ontario or planned over the next 10 years, representing \$44 billion in investment.
- In terms of value, energy projects account for close to 85 percent of major projects investment in Ontario, approximately 80 percent of the total number of projects.
- In 2017, there were 49 clean technology projects valued at \$33.3 billion.
- These included: 20 hydro projects valued at \$750 million, 15 wind power projects at \$3.2 billion, eight solar projects at \$597 million, four nuclear projects at \$28.5 billion and two biomass projects at \$273 million.



2 Summary Table

Status	Energy		Minerals and Metals		Forest		Total	
	#	\$B	#	\$B	#	\$B	#	\$B
Planned	49	\$22	6	\$3.1	2	\$0.14	57	\$26
Announced	0	\$0	0	\$0	0	\$0	0	\$0
Under Review	2	\$4	3	\$2.6	0	\$0	5	\$6.5
Approval Received	1	\$0.2	0	\$0	0	\$0	1	\$0.2
Planned – Status Unknown	46	\$18	3	\$0.5	2	\$0.14	51	\$19
Under Construction	4	\$15	4	\$2.4	0	\$0	8	\$18
Total	53	\$38	10	\$5.5	2	\$0.14	65	\$44

Source: Major Projects Inventory, as of June 2017.

Note: Totals may not add up due to rounding.

2015–17 Project Trends

Status	2015		2016		2017	
	#	\$B	#	\$B	#	\$B
Planned	20	\$15	19	\$24	57	\$26
Under Construction	14	\$24	8	\$19	8	\$18
Total	34	\$39	27	\$43	65	\$44

Source: Major Projects Inventory, as of June 2017.

Note: Totals may not add up due to rounding.

MAJOR NATURAL RESOURCES PROJECTS

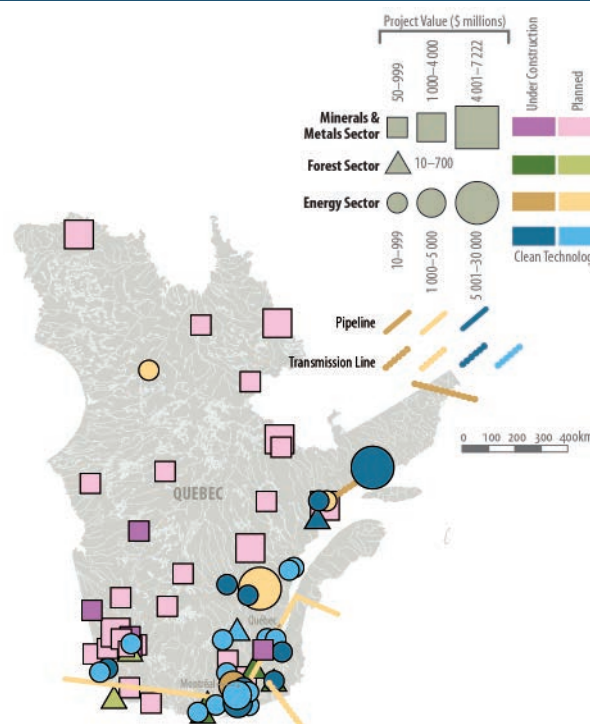
Planned and Under Construction, 2017–2027



Quebec

1 Highlights

- A total of 67 projects are currently under construction in Quebec or planned over the next 10 years, representing \$40 billion in investment.
- In terms of value, energy projects account for close to 58 percent of major projects investment in Quebec, and approximately 41 percent of the total number of projects.
- In 2017, there were 23 clean technology projects valued at \$13.4 billion.
- These included: nine hydro projects at \$9.8 billion, six wind projects at \$1.6 billion and eight biomass projects at \$1.9 billion.



2 Summary Table

Status	Energy		Minerals and Metals		Forest		Total	
	#	\$B	#	\$B	#	\$B	#	\$B
Planned	13	\$10	22	\$12	4	\$1.6	39	\$24
Announced	1	\$7	9	\$3	3	\$0.9	13	\$11
Under Review	7	\$1.3	10	\$5.3	1	\$0.7	18	\$7.4
Approval Received	0	\$0	1	\$0.8	0	\$0	1	\$0.8
Planned – Status Unknown	5	\$1.3	2	\$3.2	0	\$0	7	\$4.5
Under Construction	15	\$13.7	5	\$1.3	8	\$0.8	28	\$16
Total	28	\$23	27	\$13.6	12	\$2.4	67	\$40

Source: Major Projects Inventory, as of June 2017.

Note: Totals may not add up due to rounding.

2015–17 Project Trends

Status	2015		2016		2017	
	#	\$B	#	\$B	#	\$B
Planned	41	\$53	35	\$28	39	\$24
Under Construction	21	\$15	22	\$18	28	\$16
Total	62	\$67	57	\$46	67	\$40

Source: Major Projects Inventory, as of June 2017.

Note: Totals may not add up due to rounding.

MAJOR NATURAL RESOURCES PROJECTS

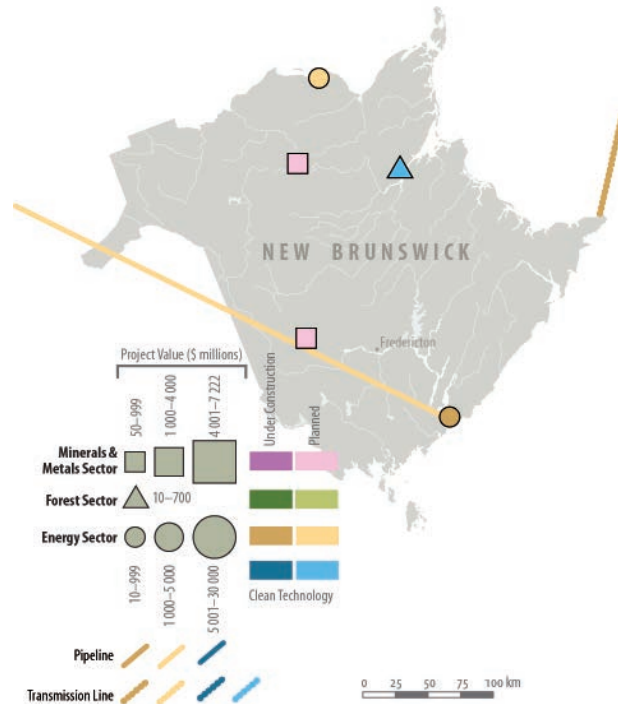
Planned and Under Construction, 2017–2027



New Brunswick

1 Highlights

- A total of seven projects are currently under construction in New Brunswick or planned over the next 10 years, representing approximately \$1.6 billion in investment.
- In terms of value, the minerals and mining sector accounts for the majority (56 percent) of major projects investment in New Brunswick, 29 percent of the total number of projects.
- In 2017, there were two clean technology projects valued at \$290 million.
- These included: one biomass project at \$45 million and one renewable energy project located across New Brunswick valued at \$250 million.



2 Summary Table

Status	Energy		Minerals and Metals		Forest		Total	
	#	\$B	#	\$B	#	\$B	#	\$B
Planned	2	\$0.27	2	\$0.9	1	\$0.05	5	\$1.2
Announced	0	\$0	0	\$0	0	\$0	0	\$0
Under Review	1	\$0.07	1	\$0.6	1	\$0.05	3	\$0.7
Approval Received	1	\$0.2	0	\$0	0	\$0	1	\$0.2
Planned – Status Unknown	0	\$0	1	\$0.3	0	\$0	1	\$0.3
Under Construction	2	\$0.4	0	\$0	0	\$0	2	\$0.4
Total	4	\$0.67	2	\$0.90	1	\$0.05	7	\$1.6

Source: Major Projects Inventory, as of June 2017.

Note: Totals may not add up due to rounding.

2015–17 Project Trends

Status	2015		2016		2017	
	#	\$B	#	\$B	#	\$B
Planned	7	\$4	6	\$1	5	\$1.2
Under Construction	2	\$0.2	2	\$0.6	2	\$0.4
Total	9	\$4	8	\$2	7	\$1.6

Source: Major Projects Inventory, as of June 2017.

Note: Totals may not add up due to rounding.

MAJOR NATURAL RESOURCES PROJECTS

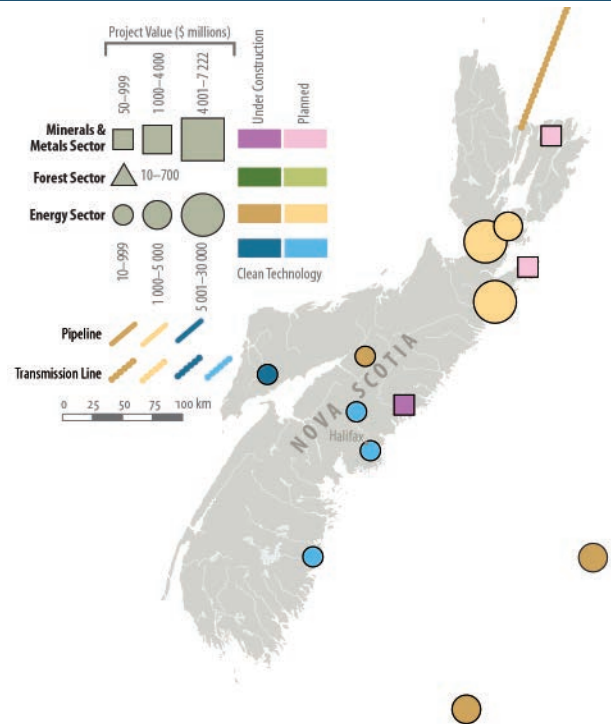
Planned and Under Construction, 2017–2027



Nova Scotia

1 Highlights

- A total of 14 projects are currently under construction in Nova Scotia or planned over the next 10 years, representing \$23 billion in investment.
- In terms of value, energy projects account for 96 percent of major projects investment in Nova Scotia, 79 percent of the total number of projects.
- In 2017, there were five clean technology projects valued at \$621 million.
- These included: three biomass projects at \$165 million, one wind project at \$330 million and one tidal project at \$126 million.



2 Summary Table

Status	Energy		Minerals and Metals		Forest		Total	
	#	\$B	#	\$B	#	\$B	#	\$B
Planned	6	\$19	2	\$1	0	\$0	8	\$20
Announced	1	\$0.04	0	\$0	0	\$0	1	\$0.04
Under Review	1	\$3	0	\$0	0	\$0	1	\$3
Approval Received	2	\$16	1	\$0.1	0	\$0	3	\$16
Planned – Status Unknown	2	\$0.1	1	\$0.8	0	\$0	3	\$1
Under Construction	5	\$3	1	\$0.1	0	\$0	6	\$3
Total	11	\$22	3	\$1	0	\$0	14	\$23

Source: Major Projects Inventory, as of June 2017.

Note: Totals may not add up due to rounding.

2015–17 Project Trends

Status	2015		2016		2017	
	#	\$B	#	\$B	#	\$B
Planned	14	\$24	10	\$20	8	\$20
Under Construction	4	\$2	6	\$2	6	\$3
Total	18	\$25	16	\$22	14	\$23

Source: Major Projects Inventory, as of June 2017.

Note: Totals may not add up due to rounding.

MAJOR NATURAL RESOURCES PROJECTS

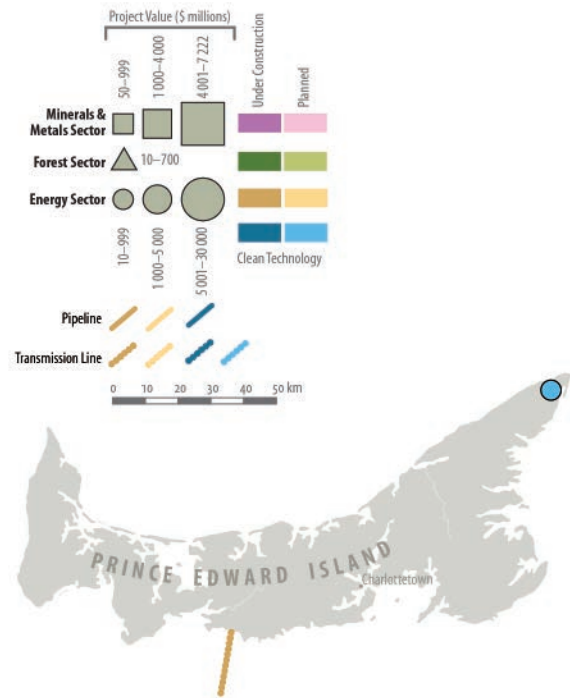
Planned and Under Construction, 2017–2027



Prince Edward Island

1 Highlights

- A total of two major projects are currently under construction over the next 10 years in Prince Edward Island, representing \$200 million in investment.
- In 2017, there was one clean technology project, a wind project valued at \$60 million.



2 Summary Table

Status	Energy		Minerals and Metals		Forest		Total	
	#	\$B	#	\$B	#	\$B	#	\$B
Planned	1	\$0.06	0	\$0	0	\$0	1	\$0.06
Announced	1	\$0.06	0	\$0	0	\$0	1	\$0.06
Under Review	0	\$0	0	\$0	0	\$0	0	\$0
Approval Received	0	\$0	0	\$0	0	\$0	0	\$0
Planned – Status Unknown	0	\$0	0	\$0	0	\$0	0	\$0
Under Construction	1	\$0.14	0	\$0	0	\$0	1	\$0.14
Total	2	\$0.2	0	\$0	0	\$0	2	\$0.2

Source: Major Projects Inventory, as of June 2017.

Note: Totals may not add up due to rounding.

2015–17 Project Trends

Status	2015		2016		2017	
	#	\$B	#	\$B	#	\$B
Planned	1	\$0.14	0	\$0	1	\$0.06
Under Construction	0	\$0	1	\$0.14	1	\$0.1
Total	1	\$0.14	1	\$0.14	2	\$0.2

Source: Major Projects Inventory, as of June 2017.

Note: Totals may not add up due to rounding.

MAJOR NATURAL RESOURCES PROJECTS

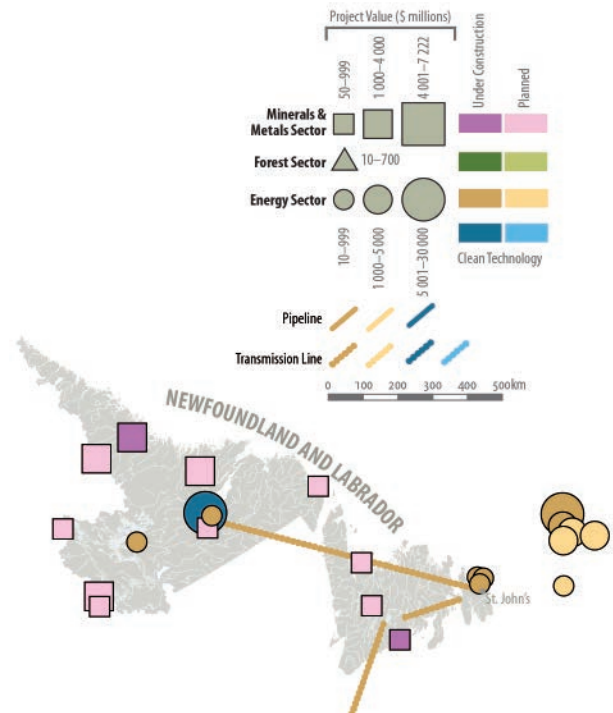
Planned and Under Construction, 2017–2027



Newfoundland & Labrador

1 Highlights

- A total of 26 projects are currently under construction in Newfoundland and Labrador or planned over the next 10 years, representing \$39 billion in investment.
- In terms of value, energy projects account for 83 percent of major projects investment in Newfoundland and Labrador, 62 percent of the number of projects.
- In 2017, there was one clean technology project in Newfoundland valued at \$5 billion, a hydro project located in Labrador.



2 Summary Table

Status	Energy		Minerals and Metals		Forest		Total	
	#	\$B	#	\$B	#	\$B	#	\$B
Planned	4	\$6	8	\$3.7	0	\$0	12	\$10
Announced	0	\$0	4	\$2	0	\$0	4	\$2
Under Review	0	\$0	2	\$0.4	0	\$0	2	\$0.4
Approval Received	0	\$0	1	\$1	0	\$0	1	\$1
Planned – Status Unknown	4	\$6	1	\$0.2	0	\$0	5	\$6.5
Under Construction	12	\$26	2	\$2.6	0	\$0	14	\$29
Total	16	\$32	10	\$6.3	0	\$0	26	\$39

Source: Major Projects Inventory, as of June 2017.

Note: Totals may not add up due to rounding.

2015–17 Project Trends

Status	2015		2016		2017	
	#	\$B	#	\$B	#	\$B
Planned	11	\$13	10	\$10	12	\$10
Under Construction	10	\$30	11	\$27	14	\$29
Total	21	\$44	21	\$37	26	\$39

Source: Major Projects Inventory, as of June 2017.

Note: Totals may not add up due to rounding.

MAJOR NATURAL RESOURCES PROJECTS

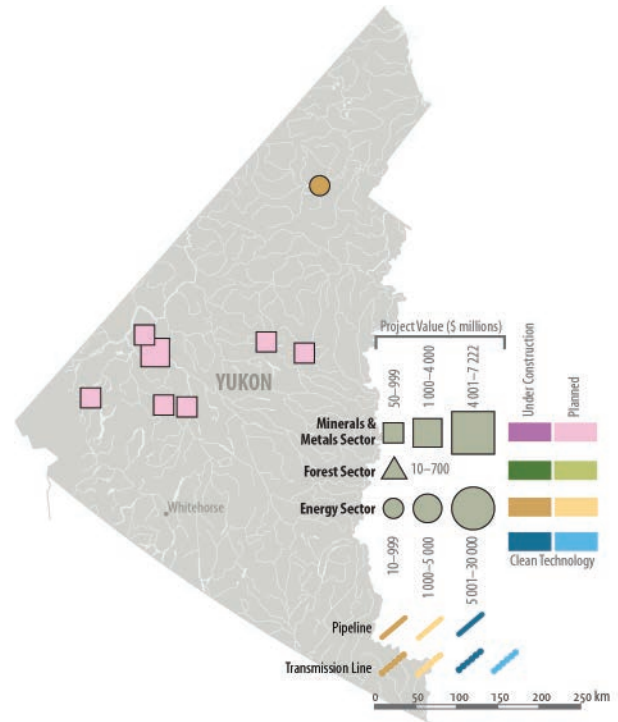
Planned and Under Construction, 2017–2027



Yukon

1 Highlights

- A total of eight projects are currently under construction in Yukon or planned over the next 10 years, representing \$4.5 billion in investment.
- Mining projects account for the majority of major projects investment in Yukon (98 percent), 88 percent of the total number of projects.
- In 2017, there were no clean technology projects in Yukon.



2 Summary Table

Status	Energy		Minerals and Metals		Forest		Total	
	#	\$B	#	\$B	#	\$B	#	\$B
Planned	1	\$0.1	7	\$4.4	0	\$0	8	\$4.5
Announced	0	\$0	3	\$1.2	0	\$0	3	\$1.2
Under Review	1	\$0.1	2	\$2.7	0	\$0	3	\$2.8
Approval Received	0	\$0	1	\$0.4	0	\$0	1	\$0.4
Planned – Status Unknown	0	\$0	1	\$0.1	0	\$0	1	\$0.1
Under Construction	0	\$0	0	\$0	0	\$0	0	\$0
Total	1	\$0.1	7	\$4.4	0	\$0	8	\$4.5

Source: Major Projects Inventory, as of June 2017.

Note: Totals may not add up due to rounding.

2015–17 Project Trends

Status	2015		2016		2017	
	#	\$B	#	\$B	#	\$B
Planned	9	\$7	9	\$7	8	\$4.5
Under Construction	0	\$0	0	\$0	0	\$0
Total	9	\$7	9	\$7	8	\$4.5

Source: Major Projects Inventory, as of June 2017.

Note: Totals may not add up due to rounding.

MAJOR NATURAL RESOURCES PROJECTS

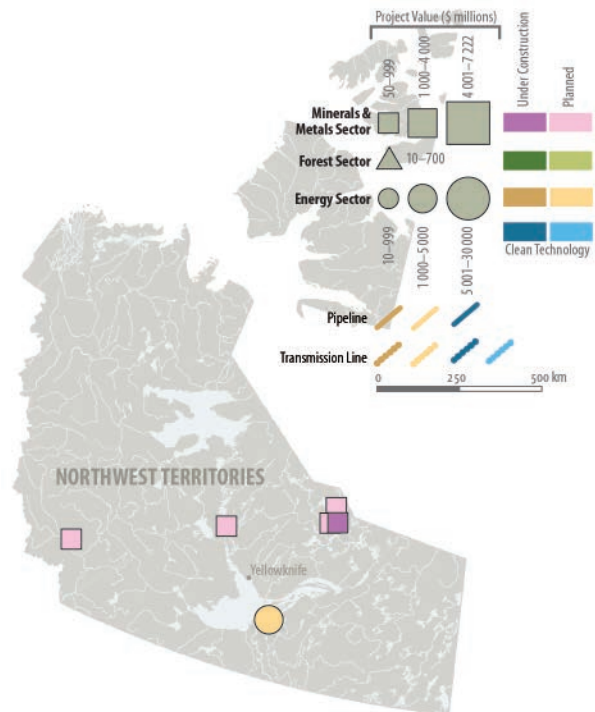
Planned and Under Construction, 2017–2027



Northwest Territories

1 Highlights

- A total of six projects are currently under construction or planned in the Northwest Territories over the next 10 years, representing \$4.5 billion in investment.
- Mining projects account for the majority of projects in the Northwest Territories.
- In 2017, there were no clean technology projects in the Northwest Territories.



2 Summary Table

Status	Energy		Minerals and Metals		Forest		Total	
	#	\$B	#	\$B	#	\$B	#	\$B
Planned	1	\$2.3	4	\$2	0	\$0	5	\$4
Announced	0	\$0	0	\$0	0	\$0	0	\$0
Under Review	0	\$0	1	\$0.2	0	\$0	1	\$0.2
Approval Received	0	\$0	2	\$1.4	0	\$0	2	\$1.4
Planned – Status Unknown	1	\$2.3	1	\$0.2	0	\$0	2	\$2.5
Under Construction	0	\$0	1	\$0.4	0	\$0	1	\$0.4
Total	1	\$2.3	5	\$2.2	0	\$0	6	\$4.5

Source: Major Projects Inventory, as of June 2017.

Note: Totals may not add up due to rounding.

2015–17 Project Trends

Status	2015		2016		2017	
	#	\$B	#	\$B	#	\$B
Planned	6	\$4	4	\$2	5	\$4
Under Construction	1	\$1	2	\$1	1	\$0.4
Total	7	\$5	6	\$3	6	\$4.5

Source: Major Projects Inventory, as of June 2017.

Note: Totals may not add up due to rounding.

MAJOR NATURAL RESOURCES PROJECTS

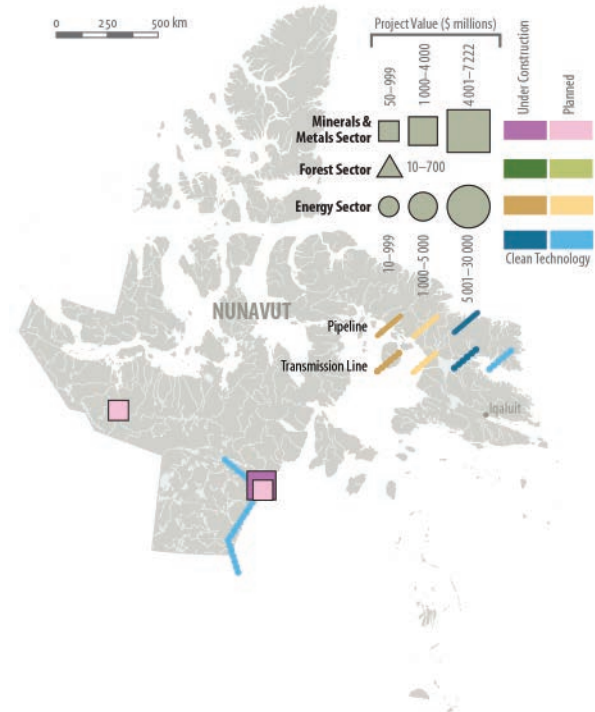
Planned and Under Construction, 2017–2027



Nunavut

1 Highlights

- A total of three projects are currently under construction in Nunavut or planned over the next 10 years, representing \$2 billion in investment.
- Mining projects account for all major projects investment in Nunavut.
- In 2017, there were no clean technology projects in Nunavut.



2 Summary Table

Status	Energy		Minerals and Metals		Forest		Total	
	#	\$B	#	\$B	#	\$B	#	\$B
Planned	0	\$0	2	\$0.8	0	\$0	2	\$0.8
Announced	0	\$0	0	\$0	0	\$0	0	\$0
Under Review	0	\$0	2	\$0.8	0	\$0	2	\$0.8
Approval Received	0	\$0	0	\$0	0	\$0	0	\$0
Planned – Status Unknown	0	\$0	0	\$0	0	\$0	0	\$0
Under Construction	0	\$0	1	\$1.2	0	\$0	1	\$1.2
Total	0	\$0	3	\$2	0	\$0	3	\$2

Source: Major Projects Inventory, as of June 2017.

Note: Totals may not add up due to rounding.

2015–17 Project Trends

Status	2015		2016		2017	
	#	\$B	#	\$B	#	\$B
Planned	4	\$4	3	\$2	2	\$0.8
Under Construction	0	\$0	0	\$0	1	\$1.2
Total	4	\$4	3	\$2	3	\$2

Source: Major Projects Inventory, as of June 2017.

Note: Totals may not add up due to rounding.

NOTES

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