

# Natural Resources: Major Projects Planned or Under Construction — 2021 to 2031



Natural Resources: Major Projects Planned or Under Construction – 2021 to 2031.  
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## INTRODUCTION: THE MAJOR PROJECTS INVENTORY

Canada has one of the largest and most diverse natural resource endowments in the world - one that positions the country favourably to meet global demand for energy, minerals, metals and forest products in a responsible and sustainable manner. Canadians have been successful in translating their resource advantage into an integral pillar of national, provincial and territorial economies.

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*In 2020, the energy, minerals and metals, and forest sectors directly and indirectly accounted for 15.5 percent of Canada's nominal gross domestic product. The sector also provided almost 1.9 million jobs.*

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Major natural resource projects are an important source of economic growth and job creation in all regions of Canada. Each year, the Government of Canada collaborates with provinces and territories to update the Major Projects Inventory to help monitor current and planned levels of investment in the energy, mining, and forest sectors.

Updates to the 2021 inventory were made between June and July of 2021 and reflect new public information available on project developments over the 10 months since the last update in August 2020. This report summarizes the updated inventory and examines trends in projects over the past five years.

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

## SCOPE AND METHODOLOGY

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

To be included in the inventory, projects must minimum capital thresholds:

- \$50 million for projects in energy and mining;
- \$20 million for electricity and forest sector projects; and
- \$10 million for clean energy and clean technology projects.

Projects with capital estimates below the thresholds, while recognized as important contributions to overall investment, are excluded due to limited data availability.

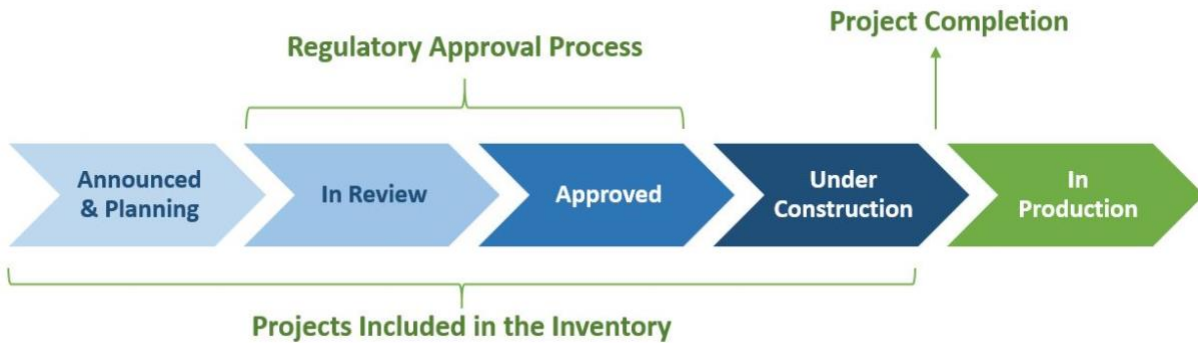
A variety of data sources are used to update the inventory, including databases maintained by Natural Resources Canada and other federal, provincial and territorial government departments, company releases, and publicly accessible websites. *The inventory is based only on information that is in the public domain.*

The inventory includes information on the value, timing and geographic location of projects. Projects included in the inventory are also categorized according to their stage of development. A project typically progresses through the following stages:

- **Announced & Planning:** planned projects that have been publicly announced but where regulatory approvals have not been submitted;

- **Under Review:** planned projects that have submitted applications for regulatory approvals but are still under review;
- **Approval Received:** planned projects that have received all major regulatory approvals i.e. the approvals required to start construction but for which construction has not yet begun;
- **Under Construction:** projects for which construction is underway; and
- **Post-Review Planning:** an additional stage to account for projects which have been rejected and returns to a planning phase in order to submit revised documents for further review.

**Figure 1. Project Stages Included in the 2021 Major Projects Inventory**



In order to highlight some of the key trends, the report also identifies projects that have been added, completed, put on hold, suspended, cancelled, or removed since the previous annual update:

- **Added projects:** new projects that have been announced since the previous update or older projects that have come within the scope for inclusion based on newly available data;
- **Completed projects:** projects that have moved past the construction phase and into the production phase, or have otherwise been completed;
- **On hold projects:** projects which have been temporarily interrupted and are expected to resume progression within a short period of time, typically 2 to 6 months;
- **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; and
- **Removed projects:** projects that are no longer within the inventory's scope due to newly available information (e.g., because they no longer meet the minimum capital thresholds).

## OVERVIEW OF NATIONAL TRENDS AND ANALYSIS FOR 2021

As of the August 2021 update, there are 443 projects with a combined capital value of \$540 billion under construction or planned over the next ten years. The 2021 inventory saw fewer project completions and fewer brand-new announcements in the midst of the pandemic. Of the projects added, almost half are projects that had been previously inactive. The number of projects put on hold, suspended, cancelled or removed in 2021 rose from last year's report.

Notably,

- 76 projects were added, representing a gain of \$26.7 billion in potential investment;
- 36 projects were completed and began production, representing \$24.3 billion of actual investment;
- 36 projects were put on hold, suspended or cancelled, representing a loss of \$70.5 billion in potential investment; and
- 20 projects representing \$8.2 billion of investment were removed.

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*The net effect of these changes is that between 2020 and 2021 the total number of projects decreased by 16 (from 459 to 443), and the value of projects decreased by \$49 billion (from \$589 billion to \$540 billion).*

*The overall decline can be attributed to the greater outflow of projects (due to completions and interruptions) relative to the inflow of new and previously inactive projects.*

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**Table 1: Total Projects and Changes from 2017 to 2021**

Changes from previous year	2017 <sup>2</sup>	2018	2019	2020	2021
Additions	126 projects (\$58B)	99 projects (\$48B)	117 projects (\$103B)	105 projects (\$47B)	76 projects (\$27B)
Completed	50 projects (\$33B)	80 projects (\$76B)	45 projects (\$25B)	59 projects (\$23B)	36 projects (\$24B)
On hold/ Suspended/ Cancelled	13 projects (\$41B)	37 projects (\$77B)	19 projects (\$33B)	25 projects (\$64B)	36 projects (\$70B)
Removed	13 projects (\$10B)	35 projects (\$15B)	16 projects (\$3B)	17 projects (\$5B)	20 projects (\$8B)
<b>Total Projects Included<sup>1</sup></b>	<b>471 projects (\$684B)</b>	<b>418 projects (\$585B)</b>	<b>455 projects (\$635B)</b>	<b>459 projects (\$589B)<sup>3</sup></b>	<b>443 projects (\$540B)</b>

<sup>1</sup>Totals may not add due to rounding.

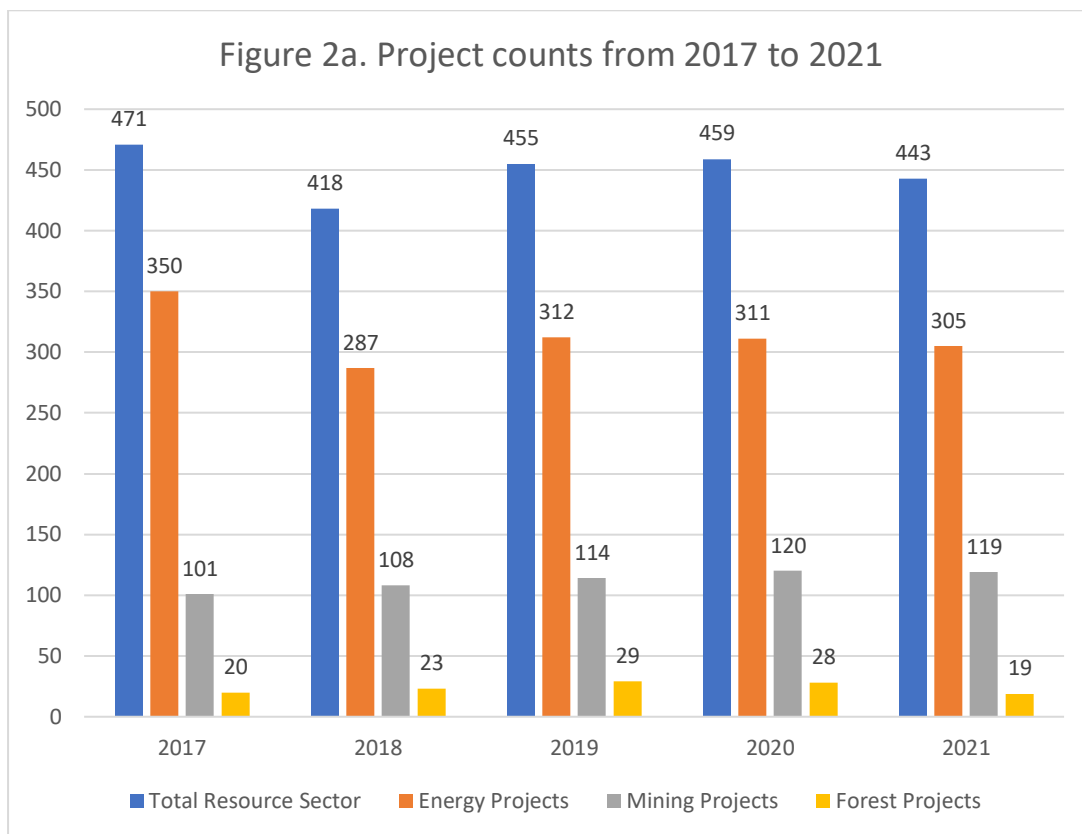
<sup>2</sup>Due to the \$10 million threshold for clean technology projects introduced in 2017, an extra 23 projects valued at \$347 million were added in 2017.

<sup>3</sup>Revisions to project costs in 2021 led to an overall increase from \$589B to \$616B.

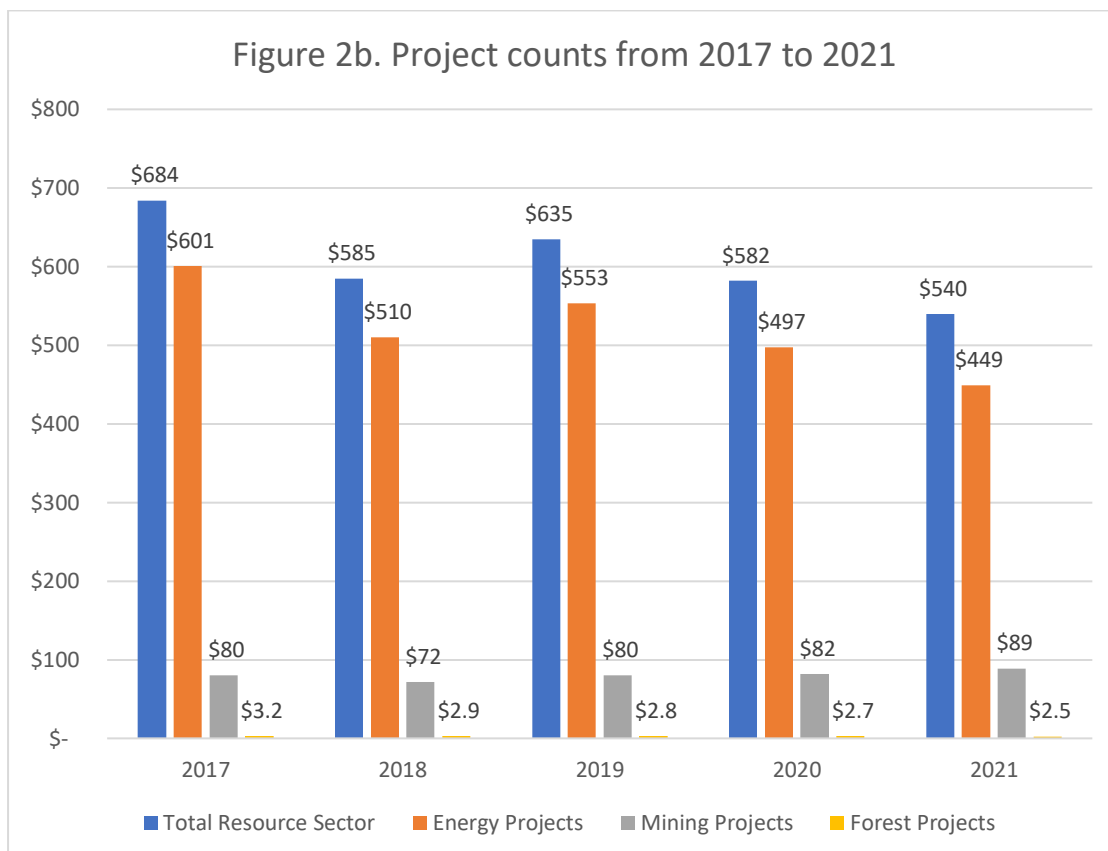
Although estimates of potential capital investment for existing projects are not typically updated to reflect inflation, revisions to investment estimates for other reasons (e.g., cancellation of a project sub-component) may influence changes in total potential capital investment between years.

In terms of project counts, all resource sectors saw marginal declines (Figure 2a). From a project cost perspective, the decrease was driven primarily by the energy sector (Figure 2b). Meanwhile, overall project cost in the minerals and metals sector grew, and the forest sector remained relatively unchanged this year.

**Figure 2a. Project counts from 2017 to 2021**



**Figure 2b. Project costs (\$Billions) from 2017 to 2021**



A more detailed look at changes since the August 2020 update shows that:

- **Added Projects:** All resource sectors saw declines in projects added relative to 2020. Project values were also lower except for the forest sector which saw a minor increase despite the reduction in new projects. Since the August 2020 update, additions to the inventory can be summarised as:
  - 53 energy projects valued at \$18 billion (17 less than 2020; -\$15B)
  - 20 mining projects valued at \$8.1 billion (10 less than 2020; -\$5.9B)
  - 3 forest projects valued at \$0.3 billion (2 less than 2020; +\$0.1B)
  
- **On Hold, Cancelled or Suspended Projects:** In 2021, there were more project interruptions reported, totalling \$70 billion compared to \$64 billion in 2020. In total, 24 major energy projects with a combined potential capital investment of \$66 billion were put on hold, cancelled or suspended over the past year.
  
- **Completed Projects:** This year 36 projects were completed, down from 59 projects in 2020. Since the last update, 28 energy projects valued at \$23 billion, 2 mining projects valued at \$0.6 billion, and 6 forest projects valued at \$0.8 billion were completed.

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*Completed projects are removed from project inventory totals as they have progressed from investment potential into productive assets that benefit Canadians through the employment of operational workforces and contributions to government revenues.*

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**Table 2: Changes from 2020 by Sector**

	Energy	Mining	Forest
<b>2020 Inventory Totals</b>	<b>311 projects (\$505B)</b>	<b>120 projects (\$82B)</b>	<b>28 projects (\$2.7B)</b>
Cost revisions	+\$17.7B (\$523B)	+\$8.0B (\$90B)	+\$0.6B (\$3.3B)
<i>Add:</i>			
New projects and old additions	53 projects (\$18B)	20 projects (\$8.1B)	3 projects (\$0.3B)
<i>Subtract:</i>			
Completed	28 projects (\$23B)	2 projects (\$0.6B)	6 projects (\$0.8B)
On Hold/Suspended/Cancelled	24 projects (\$66B)	9 projects (\$4.4B)	3 projects (\$0.2B)
Removed	7 projects (\$3.3B)	10 projects (\$4.7B)	3 projects (\$0.1B)
<b>2021 Inventory Totals</b>	<b>305 projects (\$449B)</b>	<b>119 projects (\$89B)</b>	<b>19 projects (\$2.5B)</b>

New projects continued to come forward in all sectors. In contrast to previous years, the total value of energy projects added to the inventory declined, returning to a pre-2019 trend of two consecutive years of decline from 2017. Out of the 53 projects added, 37 were brand-new announcements, 9 were the return of previously inactive projects, and 7 projects received a cost estimate for the first time.

On the mining front, the number and value of projects added to the inventory declined for the first time since 2019. In the 2021 update, 20 mining projects with a combined capital worth of \$8.1 billion were added. Out of the 20 additions, 5 were brand-new announcements, 14 were inactive projects and 1 had a new cost estimate.



In the forest sector, 3 brand-new projects were added, lower in count than 2020 but higher in value (see Table 3).

**Table 3: Added Projects by Sector and Year**

	<b>Energy</b>	<b>Mining</b>	<b>Forest</b>
<b>2017</b>	93 projects (\$52B)	18 projects (\$5B)	15 projects (\$1.9B)
<b>2018</b>	57 projects (\$35B)	31 projects (\$13B)	11 projects (\$0.5B)
<b>2019</b>	83 projects (\$91B)	20 projects (\$10B)	14 projects (\$1.0B)
<b>2020</b>	70 projects (\$30B)	30 projects (\$14B)	5 projects (\$0.2B)
<b>2021</b>	53 projects (\$18B)	20 projects (\$8.1B)	3 projects (\$0.3B)

Totals may not add due to rounding. Although estimates of potential capital investment for existing projects are not typically updated to reflect inflation, revisions to investment estimates for other reasons (e.g., cancellation of a project sub-component) may influence changes in total potential capital investment between years.

Out of the 76 projects added in 2021, 44 are classified as Clean Technology (Clean Tech) projects. These projects are captured as a subset of energy and forest projects identified in Table 3.

**Table 3a: Added Energy and Forest Projects Classified as Clean Tech by year**

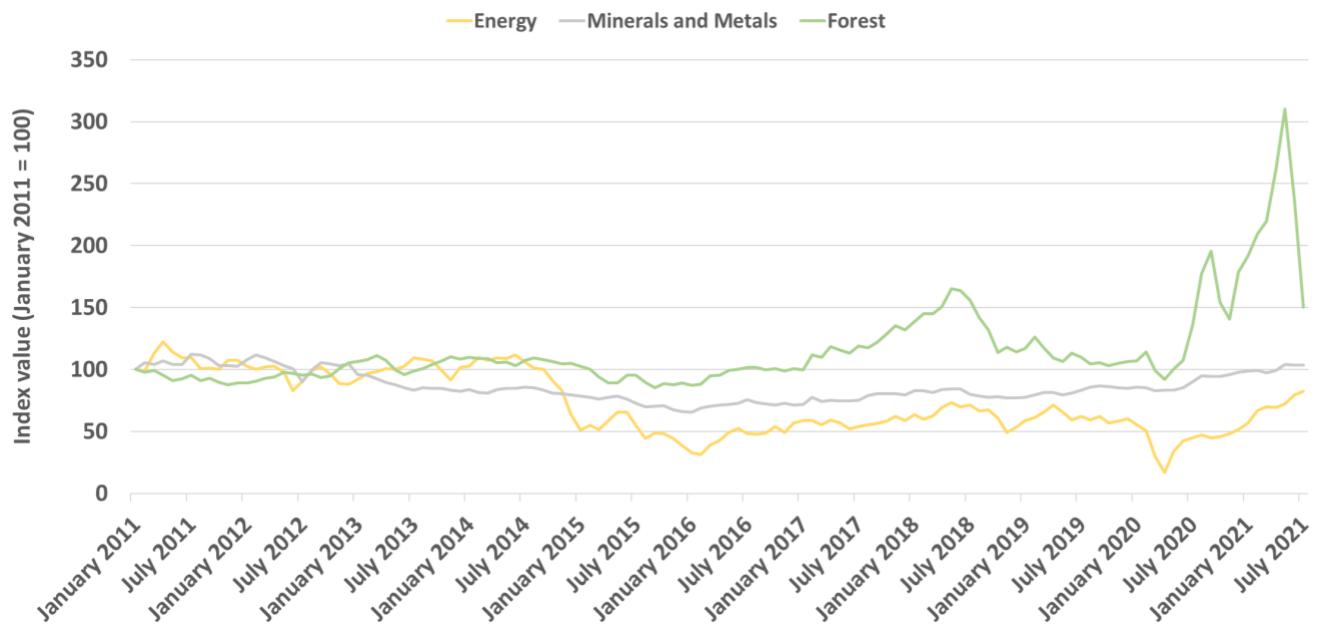
	<b>Energy Clean Technology Projects</b>	<b>Forest Clean Technology Projects</b>
<b>2017<sup>1</sup></b>	66 projects (\$6B)	6 projects (\$1B)
<b>2018</b>	34 projects (\$6B)	5 projects (\$0.2B)
<b>2019</b>	37 projects (\$10B)	4 projects (\$0.2B)
<b>2020</b>	35 projects (\$3.6B)	2 projects (\$0.1B)
<b>2021</b>	43 projects (\$12.9B)	1 project (\$0.02B)

<sup>1</sup>2017 is the year that Clean Technology project started to be tracked. Totals may not add due to rounding. Although estimates of potential capital investment for existing projects are not typically updated to reflect inflation, revisions to investment estimates for other reasons (e.g., cancellation of a project sub-component) may influence changes in total potential capital investment between years.

## ECONOMIC CONTEXT

### Commodity Prices

**Figure 3. Commodity Price Indices, 2011 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.

Canadian natural resource producers act as price-takers in international markets and, as such, they are affected by price fluctuations associated with cycles in global supply and demand. 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. The specific factors affecting investment decisions vary by sector. For example:

**Oil:** Oil prices have continued to rise through 2021 following the 2020 pandemic-induced decline in demand and the Saudi Arabia-Russia price dispute. Rising prices were due to robust oil demand from China and the reopening of major economies including the United States and Europe. Crude oil prices are forecast to rise further as oil demand recovers; however, an increase in supply from OPEC+ and United States shale producers could potentially limit price increases later this year. In 2020, WTI and WCS averaged US\$39 per barrel and US\$28 per barrel respectively. Over the first seven months of 2021, WTI averaged US\$64 per barrel (+US\$25 per barrel or 64% higher than the average price for WTI in 2020). In 2021, WCS averaged US\$51 per barrel in the first seven months of the year (+US\$23 per barrel or 82% higher than the average price for WCS in 2020).

In the first quarter of 2021, capital spending in the oil and gas industry increased by 13 per cent over the previous quarter, as the rebound in oil prices drove a busy winter drilling season. Even so, capital spending remains at 66 per cent of its pre-pandemic levels. Oil companies are expected to continue to focus on reducing debt levels before embarking on new investment plans. Based on Statistics Canada's Annual Capital Expenditures Survey, capital expenditures in the oil and gas extraction industry are expected to increase by 2%, from \$21.7 billion in 2020 to \$22.1 billion in 2021<sup>1</sup>.

<sup>1</sup> Statistics Canada Release, "Non-residential capital and repair expenditures, 2021"

In terms of economic recovery, by April 2021 the industry had reached 95.4% of the GDP level from one year before, as well as 95.7% of the employment and 102.5% of export levels. June 2021 trade data from Statistics Canada indicated a \$1.8 billion increase in petroleum exports to the US from May 2021, resulting in US petroleum exports worth \$10.4 billion. Canadian oil output and exports are expected to grow in the second half of the year alongside the reopening and pickup in the U.S. economy.

**Gas:** There are a range of forecasts for global LNG demand, some of which are market-based while others are based on net-zero scenarios. Market forecasts of global LNG demand anticipate a near doubling to 700 million tonnes per year (MTPA) by 2040, and most of this demand is expected to come from China, India and Southeast Asia. More than half of that future demand for LNG will come from countries with net zero targets, demonstrating that LNG remains a key part of decarbonisation and energy security strategies, including its use as a feedstock for the development of hydrogen economies abroad. Canada's LNG proponents are targeting the supply-demand gap that is expected to emerge by the late 2020s, and aim to build infrastructure that will provide direct access to global markets. Beyond forecasts considering current policy trajectories and market conditions, there is significant uncertainty regarding the role of natural gas and LNG within policies and potential energy mixes as countries transition to reach net zero end points. This is reflected in widely different perspectives regarding the future global demand for LNG in net zero forecasts, ranging from increasing by 26% above current levels (IHS Markit, Wood MacKenzie, July 2021) to falling by 60% from current levels (IEA, May 2021). Proposed Canadian LNG projects representing a potential investment value of nearly \$60 billion aim to minimize emissions from production through use of clean power and other technologies to align with Canada's net zero by 2050 objective, and would create the potential for that infrastructure to facilitate Canada's future hydrogen export ambitions.

Canada has several advantages in supplying LNG to global markets, from abundant and low cost natural gas resources, to proximity to key markets in Asia and Europe. Canada is seen as a reliable supplier with safe shipping routes, and a sound fiscal and political environment. The global LNG market is highly competitive, with major suppliers such as the U.S., Qatar, and Australia continuing to take the bulk of it. The U.S. has evolved from a net gas importer to one of the world's leading net exporters over the past decade, with declining imports from Canada. Energy security interests will heavily influence purchasing decisions, and LNG importers are increasingly interested in lower carbon or carbon neutral LNG, which is an advantageous development that will enable Canada to distinguish itself in a competitive market.

**Petrochemicals:** Canada's greatest competition for the attraction of new petrochemical investment is the United States, which currently offers a large selection of financial incentives to attract projects. Due to Canada's shorter construction season as a result of harsher winters and limited specialized contractors needed to support the construction of petrochemical facilities, the capital costs associated with an investment in Canada is higher than costs of construction in the US. Canada's abundant supply of low-cost petrochemical feedstock (e.g., natural gas) remains a key competitive advantage to other jurisdictions, including the United States, when considering the operational costs during the life of petrochemical facilities.

**Pipelines:** Over the past five years, major transmission pipeline projects have generated over \$10 billion in investment and created more than 10,000 direct construction jobs. Pipeline investment fell approximately 12.8 percent last year, and activity in the sector is set to improve modestly in the short-term. This is partly due to the completion of the Canadian portion of Enbridge's Line 3. The Trans Mountain pipeline expansion remains under construction and there are several secondary drivers of pipeline investment in the short term such as the Coastal GasLink pipeline, with most of the work on that project expected to be completed by 2023. Enbridge Line 3 and Trans Mountain Pipeline expansion projects will add significant takeaway capacity over the next few years.

**Metals:** Metals prices are likely to increase in the coming decade due to growing populations, developing economies, and demand for clean technology materials. While the short-term outlook for some clean technology commodities is currently weak due to oversupply, rapid demand growth for electric vehicles (EVs) and EV charging infrastructure is expected to attract investment in minerals and metals to support a low-carbon economy. This shift is encouraged by actions by several governments, including the Government of Canada, which recently announced that all new light-duty cars and passenger trucks must be zero-emission by 2035 and will lead to increased production and exploration for commodities such as copper, nickel, and lithium. The pandemic sent several prices soaring, especially commodities to which investors turn in uncertain markets, such as gold which peaked at prices 30.2% above February 2020 levels. Sustained prices for many commodities supports a positive outlook on exploration, especially with the rollout of vaccines and spending by governments throughout the world. Spending intentions are expected to be up 38% to \$2.9 billion in 2021, with gold expected to account for 70% of exploration spending, up from 57% two years ago.

**Non-metallic minerals:** Canada is an important global producer of non-metallic minerals, especially potash, metallurgical coal (used in steelmaking), and diamonds. Canada continues to be the world's largest producer of potash, and while the COVID-19 pandemic weakened demand and prices, growing global food demand is expected to support potash demand and prices. Canada is also the world's fourth largest exporter of metallurgical coal, a key steelmaking raw material, with accounts for 97% of Canada's direct coal exports. Steel and metallurgical coal prices decreased as the COVID-19 pandemic disrupted global manufacturing and construction activity. However, as economies rebound and invest in new infrastructure as stimulus, demand for steel and other mining products used in construction are expected to rebound, pulling up prices. Finally, Canada is the third largest global producer of mined diamonds at about 15% of global production, with diamond exports in 2019 valued at \$2.4 billion. Reduced consumer spending and shutdowns from the COVID-19 pandemic have reduced demand for diamonds, and while industry is likely to recover as demand returns, economic uncertainty continues to disrupt regular diamond demand.

**Forest sector:** The post-pandemic economic landscape differs significantly across forest subsectors. The wood product subsector has rebounded strongly since mid-2020 due to robust market conditions, including higher demand from the US housing market and strong prices. By mid-2021, prices started to decline from record highs – however, strong housing demand in the US will likely continue to support a strong wood products market.

After the initial shock from the COVID-19 crisis, the recovery for pulp mills was slower. However, after a prolonged period of weakness that started in 2019, pulp prices rebounded in Q3 2020. Since mid-2020, logistics issues have emerged in the pulp market, due mostly to congestion in the transportation supply chain and container shortages at key ports. These challenges in the domestic supply chain, combined with strong demand in Asia, could continue to put upward pressure on pulp prices and create stable market conditions.

In the paper market (particularly the printing & writing and newsprint segments), the outlook remains weak despite modest price increases triggered by gradual re-opening in the economy. Nonetheless, the COVID-19 crisis accelerated the long-term, structural decline in demand for newsprint and printing and writing paper.

This uneven recovery and different outlook across forest subsectors contribute to regional imbalances in Canada. The irreversible decline in newsprint and printing and writing paper has a disproportionate impact on central and eastern Canada, while strength in solid wood products benefits western Canada.

**Electricity and low carbon energy sector:** As economies around the world shift towards a low carbon economy, energy systems are transitioning to renewable and non-emitting electricity as a primary source of energy. Although Canada starts from a position of strength with 82% of electricity supplied from non-emitting sources, electricity represents only about 20% of its primary energy consumption and, as such, it has many hurdles to overcome to meet its ambitious emissions reduction target.

Overall, the electricity sector spends on average \$23 billion annually in capital expenditures, contributes \$11 billion annually to Canada's GDP, and employs over 110,000 Canadians. The sector is responsible for some of the largest capital projects across the country, such as the \$9 billion Site C project in BC, the \$8.7 billion Keeyask project in Manitoba, and Ontario's \$26 billion investment in the refurbishment of its nuclear capacity. Despite the overall reduced economic activity due to COVID-19, in 2020, capital and repairs investments in the electricity sector in Canada increased by almost 13%, to \$25 billion, from \$22.2 billion in 2019.

## OVERVIEW OF SECTOR TRENDS AND ANALYSIS FOR 2021

### Energy Projects

As of August 2021, there are 305 energy projects in the inventory with a combined capital value of \$449 billion, down from 311 projects valued at \$505 billion in 2020. The decrease in total number and value of energy projects in the 2021 inventory is due to fewer additions (53 projects valued at \$18B compared to 70 projects added in 2020 with a valuation of \$33 billion) and greater project interruptions (31 energy projects valued at \$69B exited the inventory compared to 27 projects valued at \$64B last year). The announcement of a \$1.3 billion Hydrogen production and liquefaction facility in Alberta, owned by Air Products, was the largest brand-new addition.

Energy projects span many sub-sectors, including those in the oil and gas industry (e.g., oil sands, offshore, natural gas, LNG, export terminals, storage facilities, and pipelines) and in electricity generation and transmission (e.g., nuclear, renewables, and power lines).

**Table 4: Sub-sector trends in energy projects 2017-2021**

	2017	2018	2019	2020	2021
<b>Total Energy Projects</b>	<b>\$601B</b> <b>350 projects</b>	<b>\$510B</b> <b>287 projects</b>	<b>\$553B</b> <b>312 projects</b>	<b>\$505B</b> <b>311 projects</b>	<b>\$449B</b> <b>305 projects</b>
<b>Oil and Gas</b>	\$478B 143 projects	\$393B 125 projects	\$434B 126 projects	\$392B 127 projects	\$336B 102 projects
<b>Electricity</b>	\$117B 197 projects	\$111B 152 projects	\$115B 173 projects	\$109B 159 projects	\$99B 154 projects
<b>Other<sup>1</sup></b>	\$5B 10 projects	\$6B 10 projects	\$4B 13 projects	\$4B 25 projects	\$14B 49 projects

<sup>1</sup> Other primarily includes biomass/biofuel/geothermal production activities. Totals may not add due to rounding/ Although estimates of potential capital investment for existing projects are not typically updated to reflect inflation, revisions to investment estimates for other reasons (e.g., cancellation of a project sub-component) may influence changes in total potential capital investment between years.

### Oil Sands

There are 44 oil sands-related projects (e.g., in situ, mining, upgrading and refining) in the inventory, representing \$107 billion in potential investment. This compares with the 46 projects valued at \$105 billion in the 2021 inventory. One new oil sands project with a capital worth of \$2 billion was added since the August 2020 update. At the same time, three existing oil sands-related projects, with a combined capital worth of \$0.9 billion went to completion. Most of the remaining increase in the total value of oil sands projects since 2020 was due to cost revisions for existing projects resulting in a net increase of \$1.5B.

**Table 5: Oil sands project trends 2017-2021**

	2017	2018	2019	2020	2021
<b>Oil Sands Projects<sup>1</sup></b>	\$168B 53 projects	\$138B 52 projects	\$130B 50 projects	\$105B 46 projects	\$107B 44 projects

<sup>1</sup> Excludes pipeline projects. Totals may not add due to rounding. Although estimates of potential capital investment for existing projects are not typically updated to reflect inflation, revisions to investment estimates for other reasons (e.g., cancellation of a project sub-component) may influence changes in total potential capital investment between years.

## Natural Gas

There are 33 natural gas-related projects (e.g., natural gas pipelines, export facilities and gas-fired generators) in the inventory, representing \$124 billion in potential investment, including an investment decision on LNG Canada. This compares to 43 projects valued at \$157 billion in the 2020 inventory. Since the August 2020 update, two new natural gas-related projects with a combined capital worth of \$0.2 billion were added to the inventory. Meanwhile, three natural gas-related projects with a combined capital cost of \$0.4 billion were completed and nine were put on hold, suspended or cancelled with a combined capital value of \$38 billion.

**Table 6: Natural gas project trends 2017-2021**

	2017	2018	2019	2020	2021
<b>Natural Gas Projects</b>	\$193B 59 projects	\$158B 45 projects	\$193B 43 projects	\$157B 43 projects	\$124B 33 projects

Totals may not add due to rounding. Although estimates of potential capital investment for existing projects are not typically updated to reflect inflation, revisions to investment estimates for other reasons (e.g., cancellation of a project sub-component) may influence changes in total potential capital investment between years.

## Pipelines

There are 26 pipeline projects in the inventory, representing \$60 billion in potential investment. This compares to 34 pipeline projects valued at \$88 billion in the 2020 inventory. Since the August 2020 update, one new pipeline projects with a capital worth of \$0.2 billion was added to the inventory. Meanwhile, four existing projects with a combined capital cost of \$9.7 billion were completed and a further five projects worth \$22B were either put on hold, suspended or cancelled.

**Table 7: Pipeline project trends 2017-2021**

	2017	2018	2019	2020	2021
<b>Pipeline Projects</b>	\$92B 33 projects	\$68B 24 projects	\$74B 26 projects	\$88B 34 projects	\$60B 26 projects

Totals may not add due to rounding. Although estimates of potential capital investment for existing projects are not typically updated to reflect inflation, revisions to investment estimates for other reasons (e.g., cancellation of a project sub-component) may influence changes in total potential capital investment between years.

## Mining Projects

There are 119 major mining-related projects (e.g., mine constructions, redevelopments, expansions and processing facilities) in the inventory, representing \$89 billion in potential investment. Metal mines (e.g., gold, copper, nickel, zinc) account for just over two thirds of the value of major mining-related projects. Non-metal mines (e.g., potash, diamonds) and coal mines account for most of the remainder.

Mining projects were relatively stable with an inflow of 20 new projects valued at \$8.1 billion and an outflow of 21 projects worth \$9.7B. Paired with upwards cost revisions, this resulted in a marginally lower count, albeit with a higher value relative to 2020. Projects in British Columbia account for 25 percent of the total value of all mining-related projects, Saskatchewan 22.2 percent, Quebec 16.5 percent, and Ontario for 16.2 percent. The remaining projects are spread across all provinces and territories, with the exception of Prince Edward Island.

**Table 8: Mining project trends 2017-2021**

	2017	2018	2019	2020	2021
<b>Total Mining-related projects</b>	<b>\$80B</b> <b>101 projects</b>	<b>\$72B</b> <b>108 projects</b>	<b>\$80B</b> <b>114 projects</b>	<b>\$82B</b> <b>120 projects</b>	<b>\$89B</b> <b>119 projects</b>
<b>Mines – Metals</b>	\$48B 65 projects	\$48B 76 projects	\$51B 77 projects	\$56B 83 projects	\$56B 81 projects
<b>Mines – Non-metals</b>	\$26B 21 projects	\$20B 19 projects	\$19B 18 projects	\$15B 14 projects	\$17B 14 projects
<b>Mines – Coal</b>	\$3B 6 projects	\$4B 10 projects	\$8B 13 projects	\$8B 16 projects	\$13B 16 projects
<b>Other<sup>1</sup></b>	\$3B 9 projects	\$0.5B 3 projects	\$2B 6 projects	\$3B 7 projects	\$3B 8 projects

<sup>1</sup> Other primarily includes processing plants, smelters, refineries and export terminals. Totals may not add due to rounding. Although estimates of potential capital investment for existing projects are not typically updated to reflect inflation, revisions to investment estimates for other reasons (e.g., cancellation of a project sub-component) may influence changes in total potential capital investment between years.



## Forest Projects

The value and count of major forest projects (e.g., lumber, pulp and paper, biofuel production) has remained relatively stable for the past four years. As of the August 2021 update, there were 19 major forest projects across Canada, representing \$2.5 billion in potential investment. This compares to 28 forest projects valued at \$2.7 billion in the 2020 inventory.

Since last year's update, 3 new forest projects with a combined capital worth of \$0.3 billion were added to the inventory, while 6 projects with a combined capital cost of \$0.8 billion were completed and a further 3 worth \$0.2B were either put on hold or cancelled. Projects added to the inventory this year include: a \$240 million paper upgrade and re-start facility in Quebec owned by Kruger, a \$35 million mill improvement project in British Columbia owned by Interfor Corporation and a proposed \$20 million industrial park in the Northwest Territories that will have a pellet mill, sawmill, and a biomass power plant.

Nine projects in Quebec account for 64 percent of forest projects value. The remaining forest projects are spread across Saskatchewan, British Columbia, New Brunswick, Ontario, Northwest Territories and Newfoundland and Labrador.

**Table 9: Forest project trends 2017-2021**

Total	2017	2018	2019	2020	2021
<b>Forest Projects</b>	\$3.2B 20 projects	\$2.9B 23 projects	\$2.8B 29 projects	\$2.7B 28 projects	\$2.5B 19 projects

Totals may not add due to rounding. Although estimates of potential capital investment for existing projects are not typically updated to reflect inflation, revisions to investment estimates for other reasons (e.g., cancellation of a project sub-component) may influence changes in total potential capital investment between years.

## Clean Technology Projects

Clean technologies have a crucial role to play in Canada’s transition to a low-carbon economy. In addition to reducing the environmental impact of resource development, clean technologies have the potential to strengthen the productivity and competitiveness of resource firms and allow them to enter new markets, including through the development of new and innovative products. Natural resource firms across Canada are making significant investments in clean technology solutions, and these investments are expected to continue as progress is made toward meeting climate targets.

Since 2017, the Major Projects Inventory Report has reported on major clean technology projects using a \$10 million capital worth threshold. These projects are captured as subsets of the energy and forest sector totals and are not in addition to the sector totals reported in Table 3. Clean technology projects included in the Major Projects Inventory are largely renewable electricity projects (e.g., hydro, wind, solar, biomass, tidal, and geothermal) and non-emitting energy projects (e.g., nuclear, biofuels, and carbon capture and storage) in the energy and forest sectors. While not captured here, several mining and oil and gas projects include significant clean technology components that will also help to reduce the overall environmental impact of resource development in Canada. It is also important to note that the inventory captures only clean technology investments made in the natural resources sector and does not include investments made in other sectors.

**Table 10: Clean technology project trends 2017-2021**

	2017	2018	2019	2020	2021
<b>Total Clean Technology Projects</b>	<b>172 projects (\$107.5B)</b>	<b>135 projects (\$100.6B)</b>	<b>145 projects (\$90.8B)</b>	<b>146 projects (\$88.5B)</b>	<b>168 projects (\$92.1B)</b>
Hydro	80 projects (\$49.7B)	64 projects (\$45.9B)	66 projects (\$49.0B)	57 projects (\$48B)	56 projects (\$39B)
Wind	42 projects (\$10.6B)	26 projects (\$8.8B)	29 projects (\$8.6B)	34 projects (\$7.8B)	40 projects (\$14.2B)
Biomass/Biofuels	31 projects (\$8.2B)	28 projects (\$6.2B)	32 projects (\$3.0B)	28 projects (\$4.5B)	30 projects (\$7B)
Solar	9 projects (\$0.6B)	6 projects (\$0.8B)	5 projects (\$0.7B)	7 projects (\$0.9B)	20 projects (\$3.2B)
Nuclear	4 projects (\$28.5B)	4 projects (\$28.3B)	5 projects (\$28.5B)	3 projects (\$26.1B)	4 projects (\$27.4B)
Carbon Capture and Storage	2 projects (\$9.1B)	2 projects (\$10.3B)	1 project (\$0.6B)	0 projects (\$0.0B)	0 projects (\$0.0B)
Geothermal	2 projects (\$0.4B)	1 project (\$0.0B)	2 projects (\$0.2B)	3 projects (\$0.3B)	5 projects (\$0.4B)
Tidal	1 project (\$0.1B)	0 projects (\$0.0B)	1 project (\$0.2B)	5 projects (\$0.3B)	5 projects (\$0.3B)
Other <sup>2</sup>	1 project (\$0.2B)	4 projects (\$0.3B)	4 projects (\$0.4B)	9 projects (\$0.7B)	8 projects (\$0.7B)

<sup>2</sup>Other includes novel initiatives such as micro-grid projects, battery storage projects, bioplastics, and a helium purification plant.

Note: Although tracking of clean technology projects for reporting purposes only began in 2017, prior to 2017 clean technology projects were included within the energy and forest sectors. Totals may not add due to rounding. Although estimates of potential capital investment for existing projects are not typically updated to reflect inflation, revisions to investment estimates for other reasons (e.g., cancellation of a project sub-component) may influence changes in total potential capital investment between years.

As of the August 2021 update, there are 168 energy and forest projects that are classified as clean technology projects, representing \$92.1 billion in potential investment. Hydro projects account for roughly one-third the number and 42 percent of the value of clean technology projects (56 projects valued at \$39 billion). The remaining clean technology projects are primarily wind projects (40 projects valued at \$14.2 billion) and biomass/biofuels projects (30 projects valued at \$7 billion).

This year continues to see an increase in the number and value of clean technology projects in the inventory. Since the August 2020 update, 44 new clean technology projects with a combined capital value of \$13 billion were added to the inventory. Of the 44 projects added, 33 were brand-new announcements worth \$5.1 billion (13 solar projects in Alberta, 7 hydro projects, 6 wind projects, 4 biomass/biofuels projects, 2 geothermal projects and 1 compressed natural gas project). Since the last report, 11 projects with a combined capital cost of \$6.2 billion were completed and became operational (8 hydro projects including Muskrat Falls worth \$5.5 billion, 2 wind projects, and 1 solar project). Meanwhile, 7 projects valued at \$3.9 billion were put on hold, suspended or cancelled (3 hydro projects, 2 wind projects, and 2 biomass projects). The influx of brand-new projects along with the addition of high-value inactive projects outnumbered the completions and removals this year, accounting for the gain in project count and cost.

While clean technology investments are taking place in all provinces, Ontario and British Columbia continue to lead, each having \$28 billion and \$26 billion worth of major clean technology projects planned or under construction, respectively. Quebec is the next highest province with clean technology investments valued at \$12.3 billion, followed by Manitoba at \$9.5 billion. Two nuclear plant refurbishment projects account for most of the clean technology investment planned in Ontario (\$25.8 billion). Similarly, one hydro project account for a significant portion of clean technology investment in British Columbia (\$10.7 billion). Since the August 2020 update, British Columbia added 8 new clean technology projects valued at over \$5.7 billion to the inventory with Alberta following closely behind with 21 new clean technology projects valued at \$4.3 billion.

# MAJOR NATURAL RESOURCE PROJECTS

## Planned and Under Construction, 2021-2031



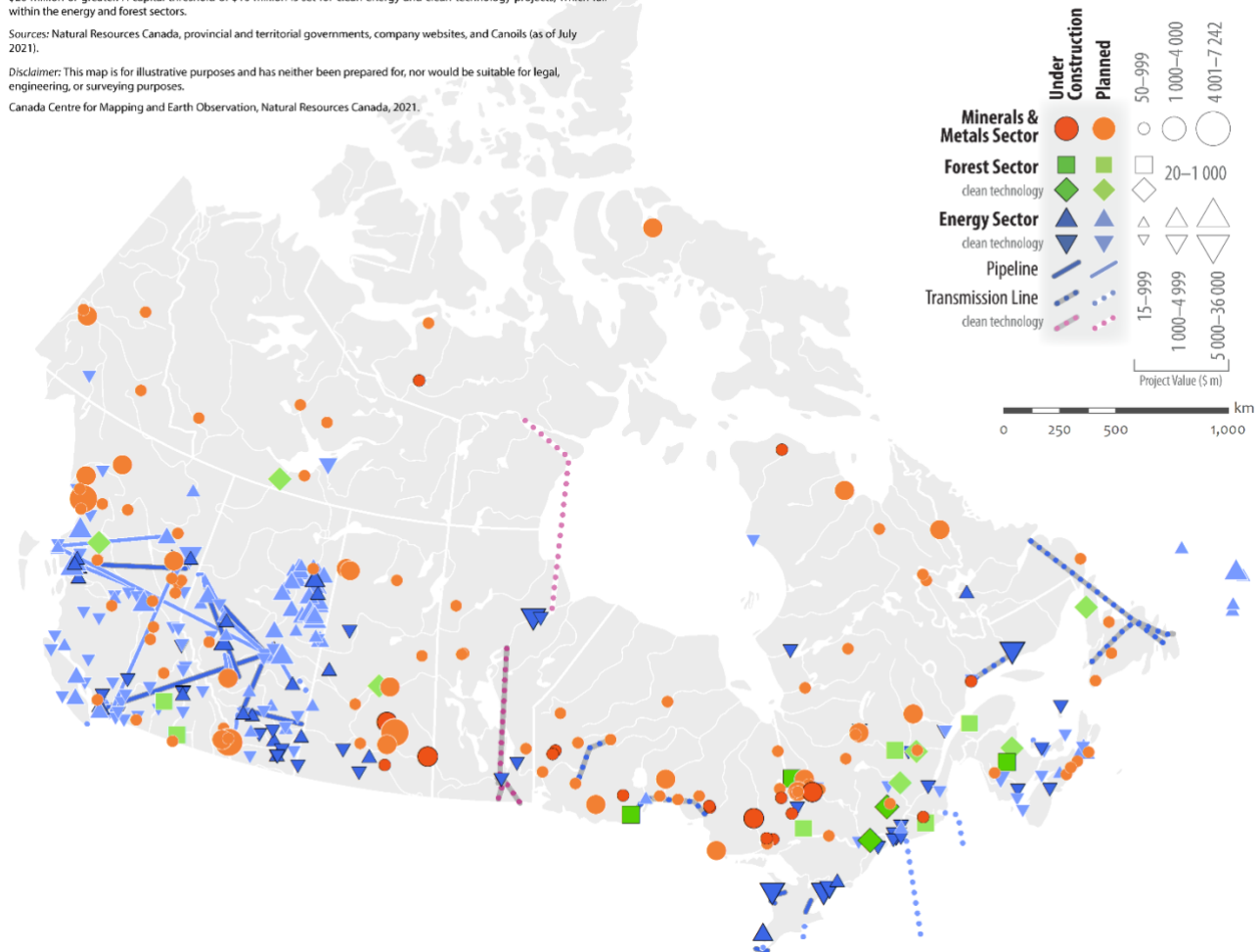
Canada

The threshold value of \$50 million is used for energy and mining sector projects. Electricity and forest projects are valued at \$20 million or greater. A capital threshold of \$10 million is set for clean energy and clean technology projects, which fall within the energy and forest sectors.

Sources: Natural Resources Canada, provincial and territorial governments, company websites, and Canolis (as of July 2021).

Disclaimer: This map is for illustrative purposes and has neither been prepared for, nor would be suitable for legal, engineering, or surveying purposes.

Canada Centre for Mapping and Earth Observation, Natural Resources Canada, 2021.



### Highlights

- As of August 2021, there are 443 projects currently under construction or planned over the next 10 years, representing \$540 billion in potential capital investment.
- Energy projects accounted for 83.1 percent of the total value of major projects in the inventory, minerals and metals projects accounted for 16.5 percent, and forest projects accounted for 0.5%.
- 76 projects valued at \$26.7 billion were added to the inventory. In addition, 36 major projects valued at \$24.3 billion were completed and began production.
- 36 major projects worth a combined \$70.5 billion were put on hold, suspended or cancelled. An additional 20 projects worth \$8.2 billion were removed from the inventory for various data quality reasons.
- These changes led to decrease in project count from 459 in 2020 to 443 in 2021 and a net \$49 billion decrease in the value of projects in the inventory, with most of the decrease having occurred in the oil and gas sector.

## Summary Table

Status	Energy		Minerals and Metals		Forest		Total	
	#	\$B	#	\$B	#	\$B	#	\$B
Planned	210	\$310	101	\$74	13	\$2.3	324	\$387
Announced	101	\$154	33	\$18	12	\$2.2	146	\$175
Under Review	56	\$72	48	\$38	1	\$0.1	105	\$110
Approval Received	51	\$83	19	\$17	0	\$0	70	\$99
Post-Review Planning	2	\$1.3	1	\$1.3	0	\$0	3	\$2.5
Under Construction	95	\$139	18	\$14	6	\$0.2	119	\$153
<b>Total</b>	<b>305</b>	<b>\$449</b>	<b>119</b>	<b>\$89</b>	<b>19</b>	<b>\$2.5</b>	<b>443</b>	<b>\$540</b>

**Source:** Major Projects Inventory, as of Aug 2021.

**Note:** Totals may not add up due to rounding.

## Trends in Project Status 2017-2021

Status	2017		2018		2019		2020		2021	
	#	\$B	#	\$B	#	\$B	#	\$B	#	\$B
Planned	342	\$534	297	\$465	332	\$471	350	\$411	324	\$387
Under Construction	145	\$178	121	\$120	123	\$164	109	\$178	119	\$153
<b>Total</b>	<b>487</b>	<b>\$711</b>	<b>418</b>	<b>\$585</b>	<b>455</b>	<b>\$635</b>	<b>459</b>	<b>\$589</b>	<b>443</b>	<b>\$540</b>

**Source:** Major Projects Inventory, as of Aug 2021.

**Note:** Totals may not add up due to rounding.

## Projects by Province/Territory

Province	Energy		Minerals and Metals		Forest		Total	
	#	\$B	#	\$B	#	\$B	#	\$B
British Columbia	92	\$189	27	\$22	4	\$0.2	123	\$212
Alberta	117	\$160	5	\$7.5	0	\$0.0	122	\$168
Saskatchewan	9	\$2.4	13	\$20	1	\$0.6	23	\$23
Manitoba	13	\$9.5	4	\$0.8	0	\$0.0	17	\$10
Ontario	19	\$35	26	\$14	1	\$0.0	46	\$50
Quebec	23	\$16	22	\$15	9	\$1.6	54	\$32
New Brunswick	4	\$3.6	1	\$0.6	2	\$0.1	7	\$4.3
Nova Scotia	9	\$8.6	4	\$0.7	0	\$0.0	13	\$9.3
Prince Edward Island	5	\$0.2	0	\$0.0	0	\$0.0	5	\$0.2
Newfoundland and Labrador	8	\$8.4	6	\$1.0	1	\$0.0	15	\$9.4
Yukon	2	\$0.1	4	\$3.4	0	\$0.0	6	\$3.4
Northwest Territories	2	\$1.2	4	\$1.6	1	\$0.0	7	\$2.9
Nunavut	0	\$0.0	3	\$2.3	0	\$0.0	3	\$2.3
Multi-jurisdictional	2	\$14	0	\$0.0	0	\$0.0	2	\$14

**Source:** Major Projects Inventory, as of Aug 2021.

**Note:** Totals may not add up due to rounding.

# MAJOR NATURAL RESOURCE PROJECTS

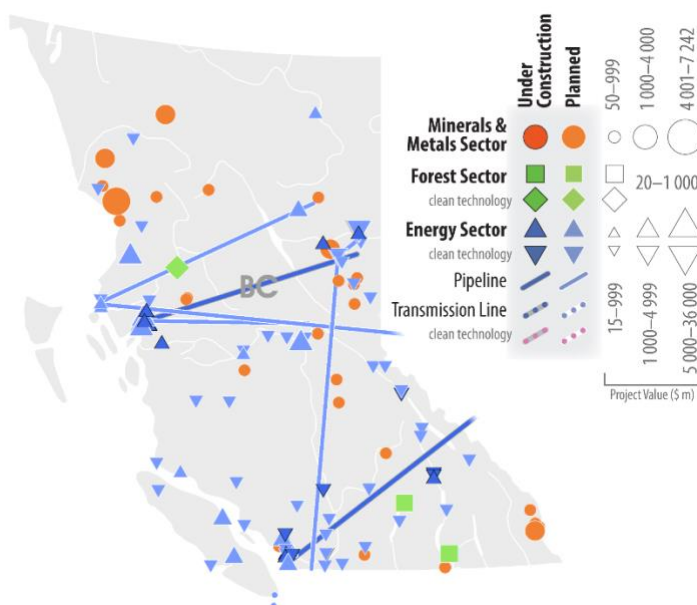
Planned and Under Construction, 2021-2031



British Columbia

## Highlights

- A total of 123 projects are under construction or planned over the next 10 years in British Columbia, representing \$212 billion and 39 percent of total investment in the inventory.
- Energy projects are valued at \$189 billion and account for more than 89 percent of the value of major project investment in the province.
- In 2021, there were 56 clean technology projects included in the B.C. inventory, valued at \$26 billion
- These included: 31 hydro projects valued at \$14 billion, 11 wind projects valued at \$8 billion, 11 biomass/biofuels projects valued at \$3.5 billion, an 3 geothermal projects valued at \$0.3 billion.



## Summary Table

Status	Energy		Minerals and Metals		Forest		Total	
	#	\$B	#	\$B	#	\$B	#	\$B
Planned	73	\$135	27	\$22	3	\$0.1	103	\$157
Announced	37	\$89	6	\$4	3	\$0.1	46	\$93
Under Review	29	\$30	18	\$18	0	\$0.0	47	\$48
Approval Received	7	\$16	3	\$1	0	\$0.0	10	\$17
Under Construction	19	\$55	0	\$0.0	1	\$0.1	20	\$55
<b>Total</b>	<b>92</b>	<b>\$189</b>	<b>27</b>	<b>\$22</b>	<b>4</b>	<b>\$0.2</b>	<b>123</b>	<b>\$212</b>

**Source:** Major Projects Inventory, as of Aug 2021.

**Note:** Totals may not add up due to rounding.

## Trends in Project Status 2017-2021

Status	2017		2018		2019		2020		2021	
	#	\$B	#	\$B	#	\$B	#	\$B	#	\$B
Planned	84	\$222	77	\$190	93	\$176	110	\$157.6	103	\$157
Under Construction	38	\$18	32	\$15	31	\$58	24	\$55.0	20	\$55
<b>Total</b>	<b>122</b>	<b>\$240</b>	<b>109</b>	<b>\$206</b>	<b>124</b>	<b>\$234</b>	<b>134</b>	<b>\$212.6</b>	<b>123</b>	<b>\$212</b>

**Source:** Major Projects Inventory, as of Aug 2021.

**Note:** Totals may not add up due to rounding.

# MAJOR NATURAL RESOURCE PROJECTS

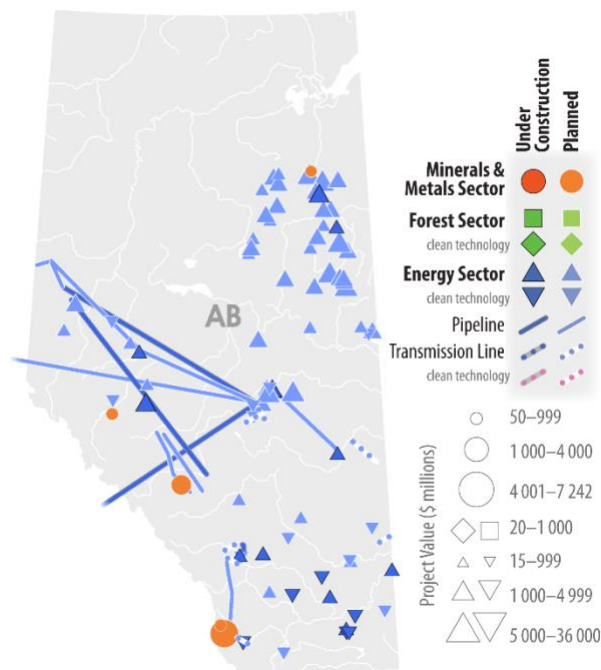
Planned and Under Construction, 2021-2031



Alberta

## Highlights

- A total of 122 projects are currently under construction or planned over the next 10 years in Alberta, representing \$168 billion in investment.
- Energy projects are valued at \$160 billion and account for more than 95 percent of the value of major project investment in the province. Out of the 28 new energy projects added to the inventory in Alberta, 21 were clean technology projects.
- In 2021, there were 39 clean technology projects included in the Alberta inventory, valued at \$7.9 billion.
- These include 15 wind projects valued at \$3.9 billion, 18 solar projects valued at \$3.1 billion, two biofuel projects valued at \$0.5 billion, one hydro facility valued at \$0.2 billion, a low sulphur marine fuel plant estimated at \$139 million and two geothermal facilities valued at \$95 million.



## Summary Table

Status	Energy		Minerals and Metals		Forest		Total	
	#	\$B	#	\$B	#	\$B	#	\$B
Planned	92	\$145	5	\$7.5	0	\$0.0	97	\$153
Announced	46	\$53	2	\$1.4	0	\$0.0	48	\$54
Under Review	16	\$35	2	\$1.1	0	\$0.0	18	\$37
Approval Received	30	\$57	1	\$5.0	0	\$0.0	31	\$62
Under Construction	25	\$15	0	\$0.0	0	\$0.0	25	\$15
<b>Total</b>	<b>92</b>	<b>\$160</b>	<b>5</b>	<b>\$7.5</b>	<b>0</b>	<b>\$0.0</b>	<b>122</b>	<b>\$168</b>

**Source:** Major Projects Inventory, as of Aug 2021.

**Note:** Totals may not add up due to rounding.

## Trends in Project Status 2017-2021

Status	2017		2018		2019		2020		2021	
	#	\$B	#	\$B	#	\$B	#	\$B	#	\$B
Planned	73	\$148	77	\$146	95	\$166	104	\$153	97	\$153
Under Construction	34	\$59	25	\$31	30	\$24	24	\$14	25	\$15
<b>Total</b>	<b>107</b>	<b>\$207</b>	<b>102</b>	<b>\$178</b>	<b>125</b>	<b>\$190</b>	<b>128</b>	<b>\$167</b>	<b>122</b>	<b>\$168</b>

**Source:** Major Projects Inventory, as of Aug 2021.

**Note:** Totals may not add up due to rounding.

# MAJOR NATURAL RESOURCE PROJECTS

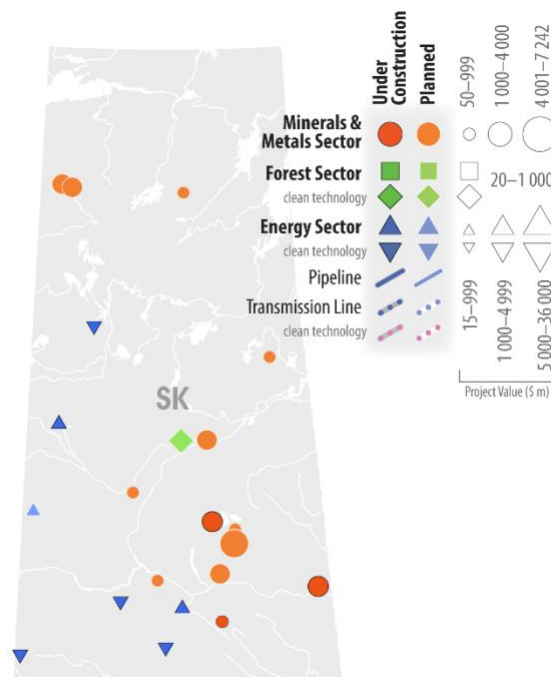
Planned and Under Construction, 2021-2031



Saskatchewan

## Highlights

- A total of 23 projects are currently under construction or planned over the next 10 years in Saskatchewan, representing approximately \$23 billion in investment.
- Minerals and metals projects are valued at \$20 billion and account for almost 87 percent of the value of major project investment in the province.
- In 2021, there were five clean technology projects included in the Saskatchewan inventory, valued at \$1.3 billion.
- These included two biomass projects valued at \$0.6 billion, two wind projects valued at \$0.6 billion and a helium purification plant worth almost \$40 million.



## Summary Table

Status	Energy		Minerals and Metals		Forest		Total	
	#	\$B	#	\$B	#	\$B	#	\$B
Planned	1	\$0.2	10	\$14	1	\$0.6	12	\$15
Announced	1	\$0.2	0	\$0.0	1	\$0.6	2	\$1
Under Review	0	\$0.0	7	\$9	0	\$0.0	7	\$9
Approval Received	0	\$0.0	3	\$5	0	\$0.0	3	\$5
Under Construction	8	\$2.2	3	\$6	0	\$0.0	11	\$8
<b>Total</b>	<b>9</b>	<b>\$2.4</b>	<b>13</b>	<b>\$20</b>	<b>1</b>	<b>\$0.6</b>	<b>23</b>	<b>\$23</b>

**Source:** Major Projects Inventory, as of Aug 2021.

**Note:** Totals may not add up due to rounding.

## Trends in Project Status 2017-2021

Status	2017		2018		2019		2020		2021	
	#	\$B	#	\$B	#	\$B	#	\$B	#	\$B
Planned	14	\$13	14	\$13	13	\$14	13	\$14.8	12	\$15
Under Construction	7	\$14	4	\$8	5	\$7	6	\$4.8	11	\$8
<b>Total</b>	<b>21</b>	<b>\$27</b>	<b>18</b>	<b>\$21</b>	<b>18</b>	<b>\$21</b>	<b>19</b>	<b>\$19.7</b>	<b>23</b>	<b>\$23</b>

**Source:** Major Projects Inventory, as of Aug 2021.

**Note:** Totals may not add up due to rounding.



# MAJOR NATURAL RESOURCE PROJECTS

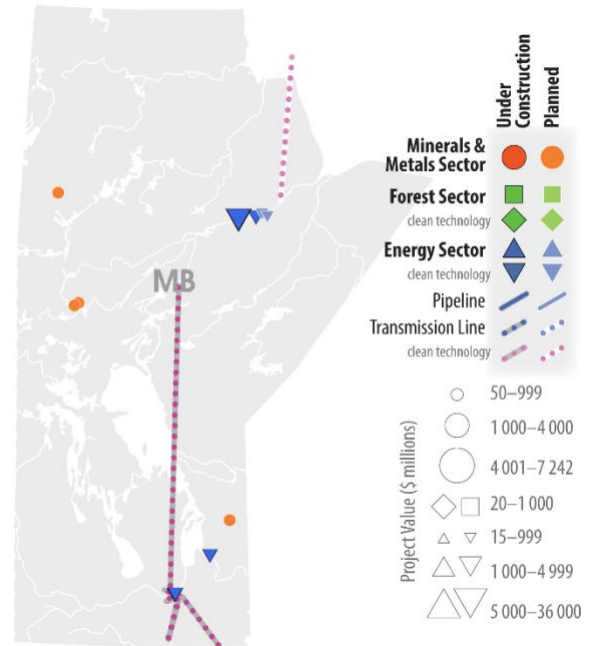
Planned and Under Construction, 2021-2031



Manitoba

## Highlights

- A total of 17 projects are currently under construction or planned over the next 10 years in Manitoba, representing approximately \$10 billion in investment.
- Energy projects are valued at \$9.5 billion and account for 95 percent of the value of major project investment in the province.
- In 2021, there were 13 clean technology projects included in the Manitoba inventory, valued at \$9.5 billion. All were hydroelectric generation and/or transmission projects.



## Summary Table

Status	Energy		Minerals and Metals		Forest		Total	
	#	\$B	#	\$B	#	\$B	#	\$B
Planned	3	\$0.2	4	\$0.8	0	\$0.0	7	\$1.0
Announced	0	\$0.0	3	\$0.3	0	\$0.0	3	\$0.3
Under Review	0	\$0.0	1	\$0.4	0	\$0.0	1	\$0.4
Approval Received	3	\$0.2	0	\$0.0	0	\$0.0	3	\$0.2
Under Construction	10	\$9.2	0	\$0.0	0	\$0.0	10	\$9.2
<b>Total</b>	<b>13</b>	<b>\$9.5</b>	<b>4</b>	<b>\$0.8</b>	<b>0</b>	<b>\$0.0</b>	<b>17</b>	<b>\$10.2</b>

**Source:** Major Projects Inventory, as of Aug 2021.

**Note:** Totals may not add up due to rounding.

## Trends in Project Status 2017-2021

Status	2017		2018		2019		2020		2021	
	#	\$B	#	\$B	#	\$B	#	\$B	#	\$B
Planned	3	\$1	5	\$1	5	\$1	4	\$0.7	7	\$1.0
Under Construction	10	\$14	9	\$9	10	\$9	9	\$9.3	10	\$9.2
<b>Total</b>	<b>13</b>	<b>\$15</b>	<b>14</b>	<b>\$10</b>	<b>15</b>	<b>\$11</b>	<b>13</b>	<b>\$10.1</b>	<b>17</b>	<b>\$10.2</b>

**Source:** Major Projects Inventory, as of Aug 2021.

**Note:** Totals may not add up due to rounding.

# MAJOR NATURAL RESOURCE PROJECTS

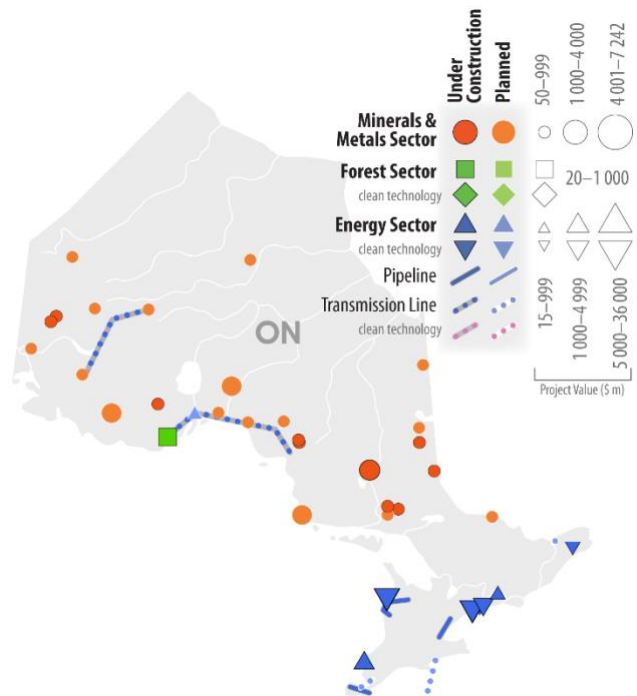
Planned and Under Construction, 2021-2031



Ontario

## Highlights

- A total of 46 projects are currently under construction or planned over the next 10 years in Ontario, representing \$50 billion in investment.
- Energy projects are valued at \$35.5 billion and account for 71 percent of the value of major project investment in the province.
- There were 8 clean technology projects included in the Ontario inventory, valued at \$28 billion.
- These included four nuclear projects valued at \$27.3 billion, two hydro projects valued at \$222 million, one wind project valued at \$200 million and one compressed natural gas project valued at \$55 million.



## Summary Table

Status	Energy		Minerals and Metals		Forest		Total	
	#	\$B	#	\$B	#	\$B	#	\$B
Planned	6	\$2.3	16	\$8.8	0	\$0.0	22	\$11
Announced	2	\$0.4	10	\$4.4	0	\$0.0	12	\$5
Under Review	3	\$1.9	2	\$1.6	0	\$0.0	5	\$3
Approval Received	1	\$0.0	3	\$1.6	0	\$0.0	4	\$2
Post-Review Planning	0	\$0.0	1	\$1.3	0	\$0.0	1	\$1
Under Construction	13	\$33.2	10	\$5.6	1	\$0.03	24	\$39
<b>Total</b>	<b>19</b>	<b>\$35.5</b>	<b>26</b>	<b>\$14.4</b>	<b>1</b>	<b>\$0.03</b>	<b>46</b>	<b>\$50</b>

**Source:** Major Projects Inventory, as of Aug 2021.

**Note:** Totals may not add up due to rounding.

## Trends in Project Status 2017-2021

Status	2017		2018		2019		2020		2021	
	#	\$B	#	\$B	#	\$B	#	\$B	#	\$B
Planned	57	\$26	29	\$28	29	\$28	24	\$11.9	22	\$11
Under Construction	8	\$18	21	\$19	17	\$21	19	\$33.8	24	\$39
<b>Total</b>	<b>65</b>	<b>\$44</b>	<b>50</b>	<b>\$48</b>	<b>46</b>	<b>\$49</b>	<b>43</b>	<b>\$45.7</b>	<b>46</b>	<b>\$50</b>

**Source:** Major Projects Inventory, as of Aug 2021.

**Note:** Totals may not add up due to rounding.

# MAJOR NATURAL RESOURCE PROJECTS

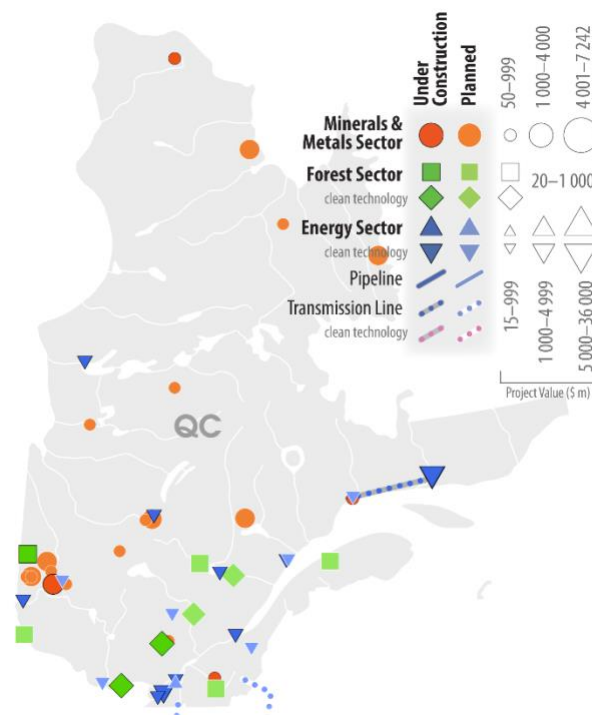
Planned and Under Construction, 2021-2031



Quebec

## Highlights

- A total of 54 projects are currently under construction or planned over the next 10 years in Quebec, representing \$32 billion in investment.
- Energy projects are valued at \$15.7 billion and account for 49 percent of the value of major project investment in Quebec while mining projects valued at \$14.6 billion account for 46 percent of the total.
- In 2021, there were 24 clean technology projects included in the Quebec inventory, valued at \$12 billion.
- These included: seven hydro projects valued at \$9.1 billion, eleven biomass projects valued at \$2.3 billion, five wind projects valued at \$0.9 billion, and a fiber extraction plant for bioplastics valued at \$25 million.



## Summary Table

Status	Energy		Minerals and Metals		Forest		Total	
	#	\$B	#	\$B	#	\$B	#	\$B
Planned	10	\$4.6	18	\$12.0	6	\$1.5	34	\$18
Announced	6	\$3.8	7	\$4.7	6	\$1.5	19	\$10
Under Review	2	\$0.1	7	\$4.7	0	\$0.0	9	\$5
Approval Received	2	\$0.7	4	\$2.6	0	\$0.0	6	\$3
Under Construction	13	\$11.1	4	\$2.7	3	\$0.1	20	\$14
<b>Total</b>	<b>23</b>	<b>\$15.7</b>	<b>22</b>	<b>\$14.6</b>	<b>9</b>	<b>\$1.6</b>	<b>54</b>	<b>\$32</b>

**Source:** Major Projects Inventory, as of Aug 2021.

**Note:** Totals may not add up due to rounding.

## Trends in Project Status 2017-2021

Status	2017		2018		2019		2020		2021	
	#	\$B	#	\$B	#	\$B	#	\$B	#	\$B
Planned	39	\$24	44	\$26	48	\$27	42	\$27	34	\$18
Under Construction	28	\$16	12	\$12	10	\$13	13	\$13	20	\$14
<b>Total</b>	<b>67</b>	<b>\$40</b>	<b>56</b>	<b>\$38</b>	<b>58</b>	<b>\$40</b>	<b>55</b>	<b>\$40</b>	<b>54</b>	<b>\$32</b>

**Source:** Major Projects Inventory, as of Aug 2021.

**Note:** Totals may not add up due to rounding.

# MAJOR NATURAL RESOURCE PROJECTS

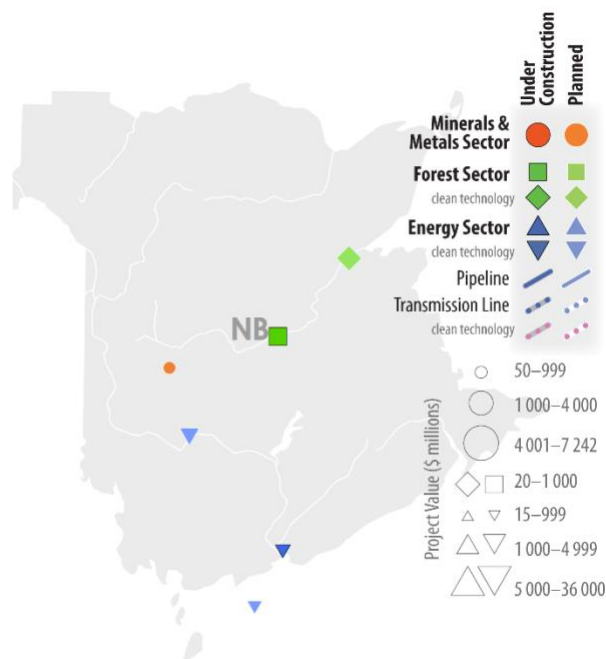
Planned and Under Construction, 2021-2031



New Brunswick

## Highlights

- A total of 7 projects are currently under construction or planned over the next 10 years in New Brunswick, representing approximately \$4.3 billion in investment.
- Energy projects are valued at \$3.6 billion and account for over 83 percent of the value of major project investment in the province, whereas mining projects account for most of the remainder.
- In 2021, there were five clean technology projects included in the New Brunswick inventory, valued at \$3.7 billion.
- These included a hydro dam upgrade valued at \$3.2 billion, two smart grid projects valued at \$333 million, a wood pellet project valued at \$70 million and a wind project valued at \$60 million.



## Summary Table

Status	Energy		Minerals and Metals		Forest		Total	
	#	\$B	#	\$B	#	\$B	#	\$B
Planned	3	\$3.4	1	\$0.6	1	\$0.1	5	\$4.1
Under Review	1	\$3.3	1	\$0.6	1	\$0.1	3	\$3.9
Approval Received	2	\$0.2	0	\$0.0	0	\$0.0	2	\$0.2
Under Construction	1	\$0.2	0	\$0.0	1	\$0.0	2	\$0.3
<b>Total</b>	<b>4</b>	<b>\$3.6</b>	<b>1</b>	<b>\$0.6</b>	<b>2</b>	<b>\$0.1</b>	<b>7</b>	<b>\$4.3</b>

**Source:** Major Projects Inventory, as of Aug 2021.

**Note:** Totals may not add up due to rounding.

## Trends in Project Status 2017-2021

Status	2017		2018		2019		2020		2021	
	#	\$B	#	\$B	#	\$B	#	\$B	#	\$B
Planned	5	\$1.2	8	\$1.2	4	\$3.7	8	\$4.1	5	\$4.1
Under Construction	2	\$0.4	0	\$0.0	2	\$0.1	0	\$0.0	2	\$0.3
<b>Total</b>	<b>7</b>	<b>\$1.6</b>	<b>8</b>	<b>\$1.2</b>	<b>6</b>	<b>\$3.8</b>	<b>8</b>	<b>\$4.1</b>	<b>7</b>	<b>\$4.3</b>

**Source:** Major Projects Inventory, as of Aug 2021.

**Note:** Totals may not add up due to rounding.

# MAJOR NATURAL RESOURCE PROJECTS

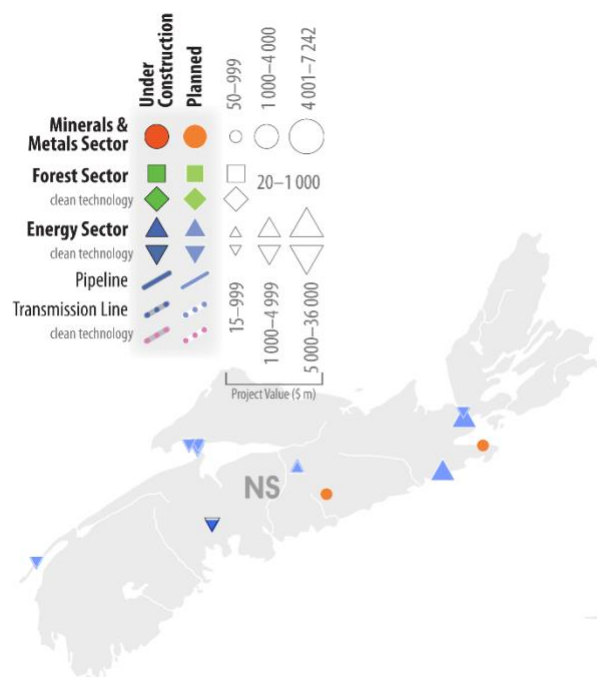
Planned and Under Construction, 2021-2031



Nova Scotia

## Highlights

- A total of 13 projects are currently under construction or planned over the next 10 years in Nova Scotia, representing \$9.3 billion in investment.
- Energy projects are valued at \$8.6 billion and account for over 92 percent of the value of major project investment in the province.
- In 2021, there were seven clean technology projects included in the Nova Scotia inventory, valued at \$0.5 billion. Five of these are novel tidal energy projects with a combined value of \$317 million. Of the two remaining, one is a wind farm valued at \$0.2 billion and a biomass plant worth \$16 million.



## Summary Table

Status	Energy		Minerals and Metals		Forest		Total	
	#	\$B	#	\$B	#	\$B	#	\$B
Planned	8	\$8.6	4	\$0.7	0	\$0.0	12	\$9.2
Announced	5	\$0.4	0	\$0.0	0	\$0.0	5	\$0.4
Under Review	1	\$0.1	3	\$0.6	0	\$0.0	4	\$0.7
Approval Received	2	\$8.1	1	\$0.1	0	\$0.0	3	\$8.2
Under Construction	1	\$0.0	0	\$0.0	0	\$0.0	1	\$0.0
<b>Total</b>	<b>9</b>	<b>\$8.6</b>	<b>4</b>	<b>\$0.7</b>	<b>0</b>	<b>\$0.0</b>	<b>13</b>	<b>\$9.3</b>

**Source:** Major Projects Inventory, as of Aug 2021.

**Note:** Totals may not add up due to rounding.

## Trends in Project Status 2017-2021

Status	2017		2018		2019		2020		2021	
	#	\$B	#	\$B	#	\$B	#	\$B	#	\$B
Planned	8	\$20	8	\$20	8	\$20	11	\$17.3	12	\$9.2
Under Construction	6	\$3	2	\$1	1	\$0	1	\$0.0	1	\$0.0
<b>Total</b>	<b>14</b>	<b>\$23</b>	<b>10</b>	<b>\$21</b>	<b>9</b>	<b>\$20</b>	<b>12</b>	<b>\$17.3</b>	<b>13</b>	<b>\$9.3</b>

**Source:** Major Projects Inventory, as of Aug 2021.

**Note:** Totals may not add up due to rounding.

# MAJOR NATURAL RESOURCE PROJECTS

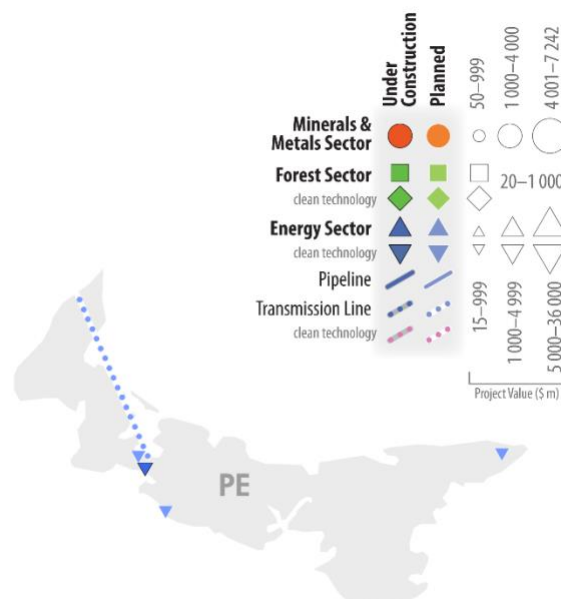
Planned and Under Construction, 2021-2031



Prince Edward Island

## Highlights

- A total of 5 projects are currently under construction or planned over the next 10 years in Prince Edward Island, representing approximately \$0.2 billion in investment.
- All five were energy projects, where four of them being clean tech projects including a wind farm project valued at \$60 million, a solar farm worth \$69 million, a battery park project with capital cost of \$35 million and a micro-grid project valued at an estimated \$25 million.



## Summary Table

Status	Energy		Minerals and Metals		Forest		Total	
	#	\$B	#	\$B	#	\$B	#	\$B
Planned	4	\$0.2	0	\$0.0	0	\$0.0	4	\$0.2
Under Review	2	\$0.1	0	\$0.0	0	\$0.0	2	\$0.1
Approval Received	1	\$0.0	0	\$0.0	0	\$0.0	1	\$0.0
Post-Review Planning	1	\$0.1	0	\$0.0	0	\$0.0	1	\$0.1
Under Construction	1	\$0.1	0	\$0.0	0	\$0.0	1	\$0.1
<b>Total</b>	<b>5</b>	<b>\$0.2</b>	<b>0</b>	<b>\$0.0</b>	<b>0</b>	<b>\$0.0</b>	<b>5</b>	<b>\$0.2</b>

**Source:** Major Projects Inventory, as of Aug 2021.

**Note:** Totals may not add up due to rounding.

## Trends in Project Status 2017-2021

Status	2017		2018		2019		2020		2021	
	#	\$B	#	\$B	#	\$B	#	\$B	#	\$B
Planned	1	\$0.1	2	\$0.1	3	\$0.1	5	\$0.2	4	\$0.2
Under Construction	1	\$0.1	0	\$0.0	0	\$0.0	0	\$0.0	1	\$0.1
<b>Total</b>	<b>2</b>	<b>\$0.2</b>	<b>2</b>	<b>\$0.1</b>	<b>3</b>	<b>\$0.1</b>	<b>5</b>	<b>\$0.2</b>	<b>5</b>	<b>\$0.2</b>

**Source:** Major Projects Inventory, as of Aug 2021.

**Note:** Totals may not add up due to rounding.

# MAJOR NATURAL RESOURCE PROJECTS

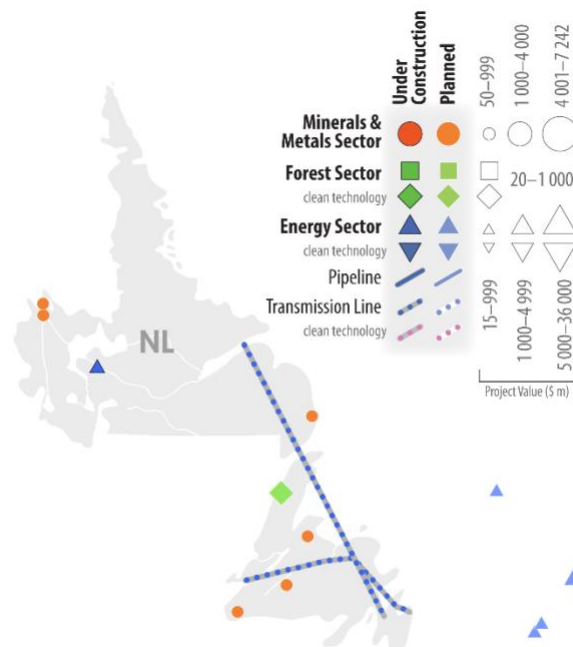
Planned and Under Construction, 2021-2031



Newfoundland and Labrador

## Highlights

- A total of 15 projects are currently under construction or planned over the next 10 years in Newfoundland and Labrador, representing \$9.4 billion in investment. Over the past year, 3 major projects worth \$10.1 billion were completed including the Muskrat Falls Hydroelectric Generating Station. At the same time, 6 projects worth \$8.6 billion were either put on hold, suspended, cancelled, or removed.
- Energy projects are now valued at \$8.4 billion and accounted for just over 89 percent of the value of major projects in the province.
- In 2021, there was one clean technology project: a wood pellet plant worth \$20 million.



## Summary Table

Status	Energy		Minerals and Metals		Forest		Total	
	#	\$B	#	\$B	#	\$B	#	\$B
Planned	5	\$8.1	6	\$1.0	1	\$0.02	12	\$9.1
Announced	1	\$6.8	0	\$0.0	1	\$0.02	2	\$6.8
Under Review	2	\$0.6	4	\$0.9	0	\$0.0	6	\$1.5
Approval Received	2	\$0.7	2	\$0.1	0	\$0.0	4	\$0.9
Under Construction	3	\$0.3	0	\$0.0	0	\$0.0	3	\$0.3
<b>Total</b>	<b>8</b>	<b>\$8.4</b>	<b>6</b>	<b>\$1.0</b>	<b>1</b>	<b>\$0.02</b>	<b>15</b>	<b>\$9.4</b>

**Source:** Major Projects Inventory, as of Aug 2021.

**Note:** Totals may not add up due to rounding.

## Trends in Project Status 2017-2021

Status	2017		2018		2019		2020		2021	
	#	\$B	#	\$B	#	\$B	#	\$B	#	\$B
Planned	12	\$10	15	\$12	16	\$14	14	\$12	12	\$9.1
Under Construction	14	\$29	10	\$16	10	\$16	8	\$16	3	\$0.3
<b>Total</b>	<b>26</b>	<b>\$39</b>	<b>25</b>	<b>\$28</b>	<b>26</b>	<b>\$30</b>	<b>22</b>	<b>\$28</b>	<b>15</b>	<b>\$9.4</b>

**Source:** Major Projects Inventory, as of Aug 2021.

**Note:** Totals may not add up due to rounding.



# MAJOR NATURAL RESOURCE PROJECTS

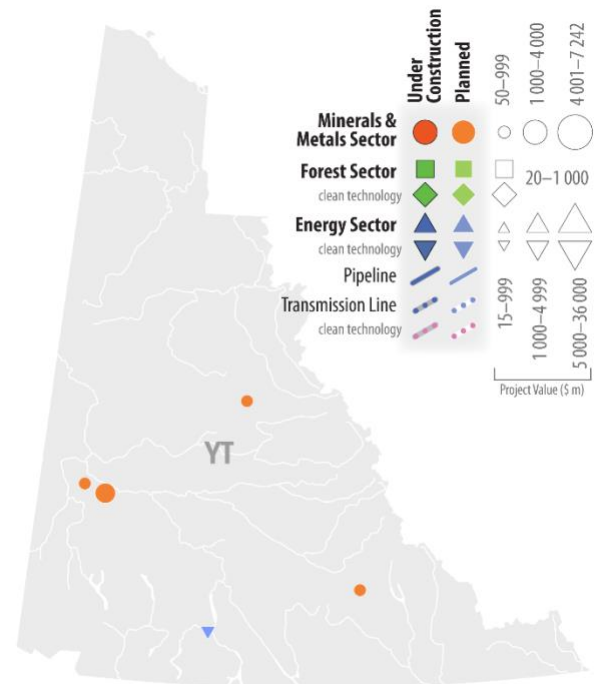
Planned and Under Construction, 2021-2031



Yukon

## Highlights

- A total of 6 projects are currently under construction or planned over the next 10 years in the Yukon, representing \$3.4 billion in investment.
- Mining projects are valued close to \$3.4 billion and account for over 99 percent of the value of major projects investment in the territory.
- As of the August 2021 update, there were two clean technology projects in the territory, a \$20 million wind power project and a \$30 million battery storage project, both in Whitehorse.



## Summary Table

Status	Energy		Minerals and Metals		Forest		Total	
	#	\$B	#	\$B	#	\$B	#	\$B
Planned	2	\$0.1	4	\$3.4	0	\$0.0	6	\$3.4
Announced	2	\$0.1	4	\$3.4	0	\$0.0	6	\$3.4
Under Construction	0	\$0.0	0	\$0.0	0	\$0.0	0	\$0.0
<b>Total</b>	<b>2</b>	<b>\$0.1</b>	<b>4</b>	<b>\$3.4</b>	<b>0</b>	<b>\$0.0</b>	<b>6</b>	<b>\$3.4</b>

**Source:** Major Projects Inventory, as of Aug 2021.

**Note:** Totals may not add up due to rounding.

## Trends in Project Status 2017-2021

Status	2017		2018		2019		2020		2021	
	#	\$B	#	\$B	#	\$B	#	\$B	#	\$B
Planned	8	\$4.5	8	\$4.6	9	\$4.5	8	\$3.8	6	\$3.4
Under Construction	0	\$0.0	1	\$0.3	1	\$0.5	1	\$0.5	0	\$0.0
<b>Total</b>	<b>8</b>	<b>\$4.5</b>	<b>9</b>	<b>\$4.9</b>	<b>10</b>	<b>\$5.0</b>	<b>9</b>	<b>\$4.3</b>	<b>6</b>	<b>\$3.4</b>

**Source:** Major Projects Inventory, as of Aug 2021.

**Note:** Totals may not add up due to rounding.



# MAJOR NATURAL RESOURCE PROJECTS

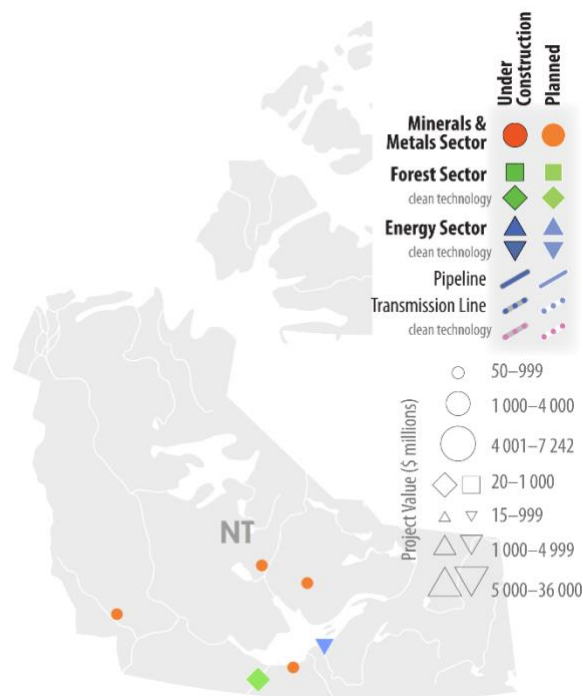
Planned and Under Construction, 2021-2031



Northwest Territories

## Highlights

- A total of 7 projects are currently under construction or planned over the next 10 years in the Northwest Territories, representing approximately \$2.9 billion in investment.
- Mining projects are valued at \$1.6 billion and account for over 55 percent of the value of major projects investment in the territory.
- In 2021, there were three clean technology projects included in the Northwest Territories, valued at \$1.3 billion. Of the 3, one is a hydroelectric project valued at \$1.2 billion, another is a wind project valued at \$40 million and the final is an industrial park for a pellet mill, sawmill and biomass power plant valued at \$20 million.



## Summary Table

Status	Energy		Minerals and Metals		Forest		Total	
	#	\$B	#	\$B	#	\$B	#	\$B
Planned	2	\$1.2	4	\$1.6	1	\$0.02	7	\$2.9
Announced	1	\$1.2	0	\$0.0	1	\$0.02	2	\$1.2
Under Review	0	\$0.0	2	\$0.7	0	\$0.0	2	\$0.7
Approval Received	1	\$0.0	2	\$0.9	0	\$0.0	3	\$0.9
Under Construction	0	\$0.0	0	\$0.0	0	\$0.0	0	\$0.0
<b>Total</b>	<b>2</b>	<b>\$1.2</b>	<b>4</b>	<b>\$1.6</b>	<b>1</b>	<b>\$0.02</b>	<b>7</b>	<b>\$2.9</b>

**Source:** Major Projects Inventory, as of Aug 2021.

**Note:** Totals may not add up due to rounding.

## Trends in Project Status 2017-2021

Status	2017		2018		2019		2020		2021	
	#	\$B	#	\$B	#	\$B	#	\$B	#	\$B
Planned	5	\$4.0	5	\$4.5	4	\$2.7	4	\$1.9	7	\$2.9
Under Construction	1	\$0.4	3	\$0.6	3	\$0.6	0	\$0.0	0	\$0.0
<b>Total</b>	<b>6</b>	<b>\$4.5</b>	<b>8</b>	<b>\$5.2</b>	<b>7</b>	<b>\$3.3</b>	<b>4</b>	<b>\$1.9</b>	<b>7</b>	<b>\$2.9</b>

**Source:** Major Projects Inventory, as of Aug 2021.

**Note:** Totals may not add up due to rounding.

# MAJOR NATURAL RESOURCE PROJECTS

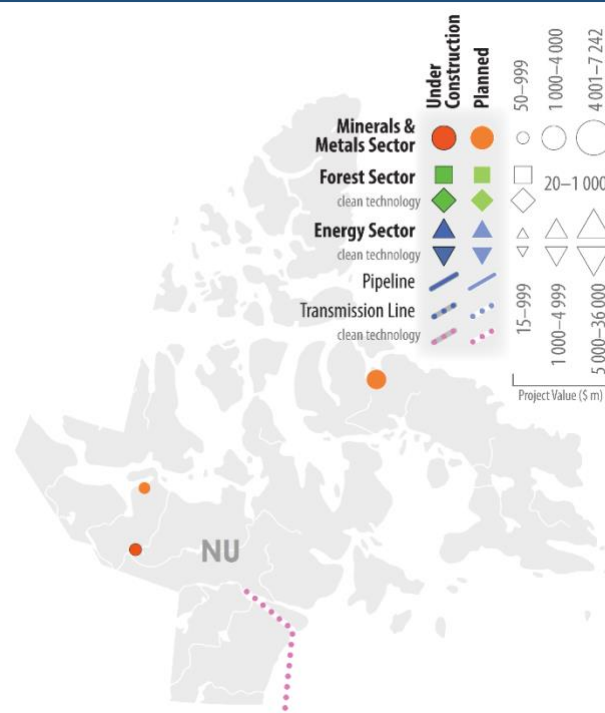
Planned and Under Construction, 2021-2031



Nunavut

## Highlights

- A total of 3 projects are currently under construction in or planned over the next 10 years in Nunavut, representing approximately \$2.3 billion in investment.
- Two of the projects are gold mines valued at \$1.3 billion, and the other, an iron ore project valued at \$1 billion.
- In 2021, there were no major clean technology projects in the territory.



## Summary Table

Status	Energy		Minerals and Metals		Forest		Total	
	#	\$B	#	\$B	#	\$B	#	\$B
Planned	0	\$0.0	2	\$1.7	0	\$0.0	2	\$1.7
Announced	0	\$0.0	1	\$0.7	0	\$0.0	1	\$0.7
Under Review	0	\$0.0	1	\$1.0	0	\$0.0	1	\$1.0
Under Construction	0	\$0.0	1	\$0.6	0	\$0.0	1	\$0.6
<b>Total</b>	<b>0</b>	<b>\$0.0</b>	<b>3</b>	<b>\$2.3</b>	<b>0</b>	<b>\$0.0</b>	<b>3</b>	<b>\$2.3</b>

**Source:** Major Projects Inventory, as of Aug 2021.

**Note:** Totals may not add up due to rounding.

## Trends in Project Status 2017-2021

Status	2017		2018		2019		2020		2021	
	#	\$B	#	\$B	#	\$B	#	\$B	#	\$B
Planned	2	\$0.8	2	\$0.8	2	\$1.4	1	\$1.0	2	\$1.7
Under Construction	1	\$1.2	1	\$1.2	1	\$0.4	1	\$0.4	1	\$0.6
<b>Total</b>	<b>3</b>	<b>\$2.0</b>	<b>3</b>	<b>\$2.0</b>	<b>3</b>	<b>\$1.8</b>	<b>2</b>	<b>\$1.4</b>	<b>3</b>	<b>\$2.3</b>

**Source:** Major Projects Inventory, as of Aug 2021.

**Note:** Totals may not add up due to rounding.