

Ontario's Critical Minerals Strategy

Unlocking potential to drive economic recovery and prosperity

2022-2027

March 2022

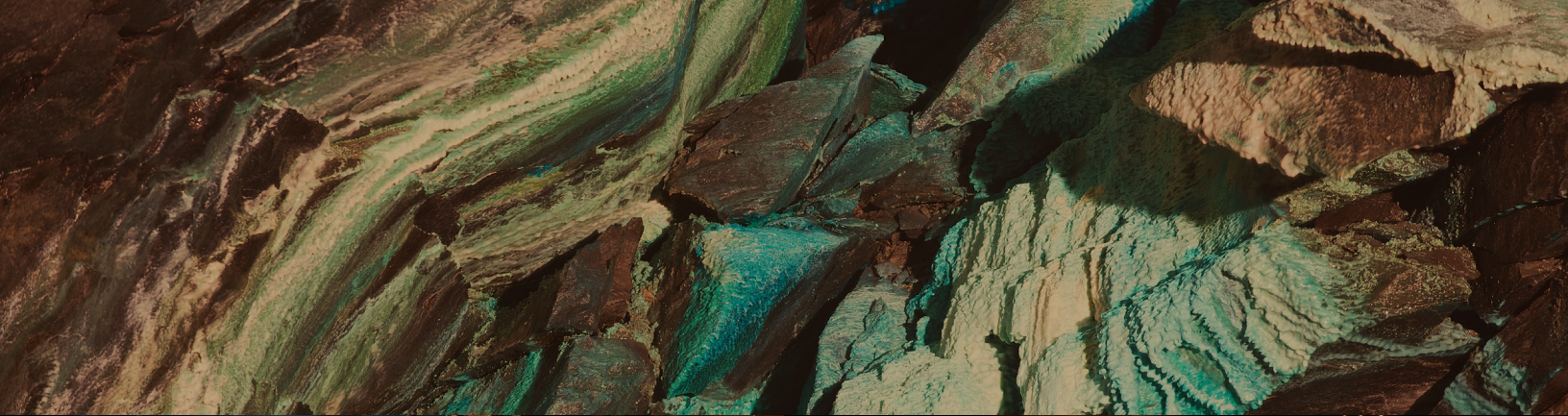


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A MESSAGE FROM THE MINISTER

Ontario is incredibly fortunate to be home to tremendous mineral wealth. This province is blessed with exquisite deposits of nickel, lithium, platinum, cobalt and dozens of other strategically important raw materials. Many of these minerals have been identified by other countries as having geopolitical significance due to supply shortages or concentration of supply in very few countries. Global conflict has exacerbated these supply vulnerabilities and Ontario must step up to meet the soaring demand for critical minerals.

The mining industry in Ontario already generates more than \$10 billion in annual mineral production and supports 75,000 direct and indirect jobs in Ontario. This industry also is the largest private sector employer of Indigenous peoples in Canada, and in Ontario, Indigenous employment accounts for 11.2% of direct mining jobs. There are also many opportunities for Indigenous-owned and operated businesses to secure lucrative contracts with mining companies that create economic development in their communities.

Ontario's vast mineral wealth in the north is perfectly complemented by a world-class manufacturing sector in the south. We believe we have an incredible opportunity to connect and vertically integrate our northern and southern economies to build a made-in-Ontario supply chain for innovative technologies like electric vehicles and battery storage.

Our government will forge Ontario into an unbreakable link in strategic global supply chains, and that's why we've developed our first-ever Critical Minerals Strategy. Under Premier Ford's leadership, Ontario stands ready to meet this soaring demand for critical minerals and reap the benefits for all Ontarians.



Greg Rickford

Minister of Northern
Development, Mines, Natural
Resources and Forestry

When our products reach the market, our trading partners know that Ontario is a jurisdiction with a clean electricity grid, high environmental standards, respects human rights and has top tier conditions for workers who receive competitive wages for their hard work. Ontario remains committed to working with Indigenous peoples on critical infrastructure and community benefit projects. Ontario also has robust consultation processes for all mineral development opportunities and always respects Indigenous rights.



Ontario stands ready to meet this soaring demand for critical minerals and reap the benefits for all Ontarians.

For many decades, Ontario's mining sector has fed demand from industry, fueling construction booms and steady growth in our manufacturing sector. As the world shifts to a greener, more connected and more tech-driven economy, there's no question that demand for critical minerals will increase. These are the materials the world wants and needs for a broad array of uses, including smartphones, batteries for electric vehicles, pharmaceuticals, solar cells and advanced manufacturing technologies to name just a few. Under these growth conditions, reliable access to global supply chains is paramount.

There will be exciting new opportunities for collaboration between the mines in the north and the manufacturing complex in the south. In a time of global supply chain uncertainty and conflict, Ontario is ready to support our allies, tap into new markets and secure Ontario's place in the global supply chain as a clean, peaceful and cooperative destination to do business for decades to come—fueling job creation, growth and investment felt by all Ontarians.



Our government's vision for Ontario's mining sector is to transform it into a leading producer of critical minerals.

Our strategy will help Ontario's mining sector realize its true potential by attracting investment, promoting further Indigenous participation in mining and creating more high-quality employment opportunities in the critical minerals sector. The many actions in the strategy will see us boost the resiliency of our supply chains, expand innovation and increase our exploration capacity. To ensure Ontario companies have the tools they need to find the mines of the future, our government is also investing \$24 million in the Ontario Junior Exploration Program, which will include \$12 million for a critical minerals funding stream. An additional investment of \$5 million over two years in a new critical minerals innovation fund will support research for extraction and processing in Ontario's north.

Our government's vision for Ontario's mining sector is to transform it into a leading producer of critical minerals. The Critical Minerals Strategy is our roadmap for driving this transformation and ensuring that Ontario takes its rightful place in the global supply chain for the economy of the future.

Greg Rickford

Minister of Northern Development, Mines, Natural Resources and Forestry





Introduction

Every day, we use and rely on products that contain critical minerals: smartphones, computer monitors, cardiac implants, magnetic resonance imaging machines and batteries are a few examples. High-growth sectors of the economy, like electric vehicles, information and communications technology (ICT) and clean technology are driving an exponential increase in demand for critical minerals.

Critical minerals extraction, processing and refining are currently concentrated in a few countries. Over-reliance on a select few countries for critical minerals supply, processing and refining has historically led to supply chain disruptions, particularly when export limits are imposed or when geopolitical instability threatens supply.

Ontario is rich in minerals — for generations, this province's geology has made it an attractive destination for prospectors and exploration companies, senior mining companies and investors. This mineral wealth gives Ontario the potential to become entrenched in the global critical minerals supply chain.

Ontario has numerous competitive advantages, in addition to its vast mineral wealth. These include its favourable business climate and tax regime, world-class talent, track record for innovation and its evolving socially and environmentally responsible regulatory framework. These competitive advantages position Ontario as a preferred critical minerals supplier to trading partners and allies around the world.

Partnerships to develop Ontario's Critical Minerals Strategy took place through the spring and summer of 2021. Roundtable discussions, engagement sessions and written comments were considered in developing this strategy. Engagement activities are summarized in Appendix A: Engagement summary. Feedback received included calls to:

- increase government incentives for exploration, mineral development, business expansion and research related to critical minerals
- increase government collaboration with post-secondary institutions to address skills gaps
- expand domestic refining and processing capacity of minerals
- increase collaboration opportunities with industry and other partners to develop new critical minerals supply chains
- ensure that Ontario has a regulatory regime that is proportional to the scale of proposed exploration and mining activities
- ensure Indigenous communities and organizations participate in and benefit from mineral exploration and development and supply chain opportunities
- expand government resource revenue sharing with Indigenous communities
- support applied research projects to strengthen mining and mineral processing research and innovation

Ontario's Critical Minerals Strategy is a comprehensive, five-year roadmap that will secure the province's position as a reliable global supplier of responsibly sourced critical minerals. The strategy is in concert with other transformative government initiatives, such as [Driving Prosperity: The Future of Ontario's Automotive Sector](#) and [A Made-in-Ontario Environment Plan](#). Taken together, these initiatives will ensure that Ontario can grow advanced manufacturing supply chains, including those related to electric vehicle production, and create sustainable economic development opportunities.

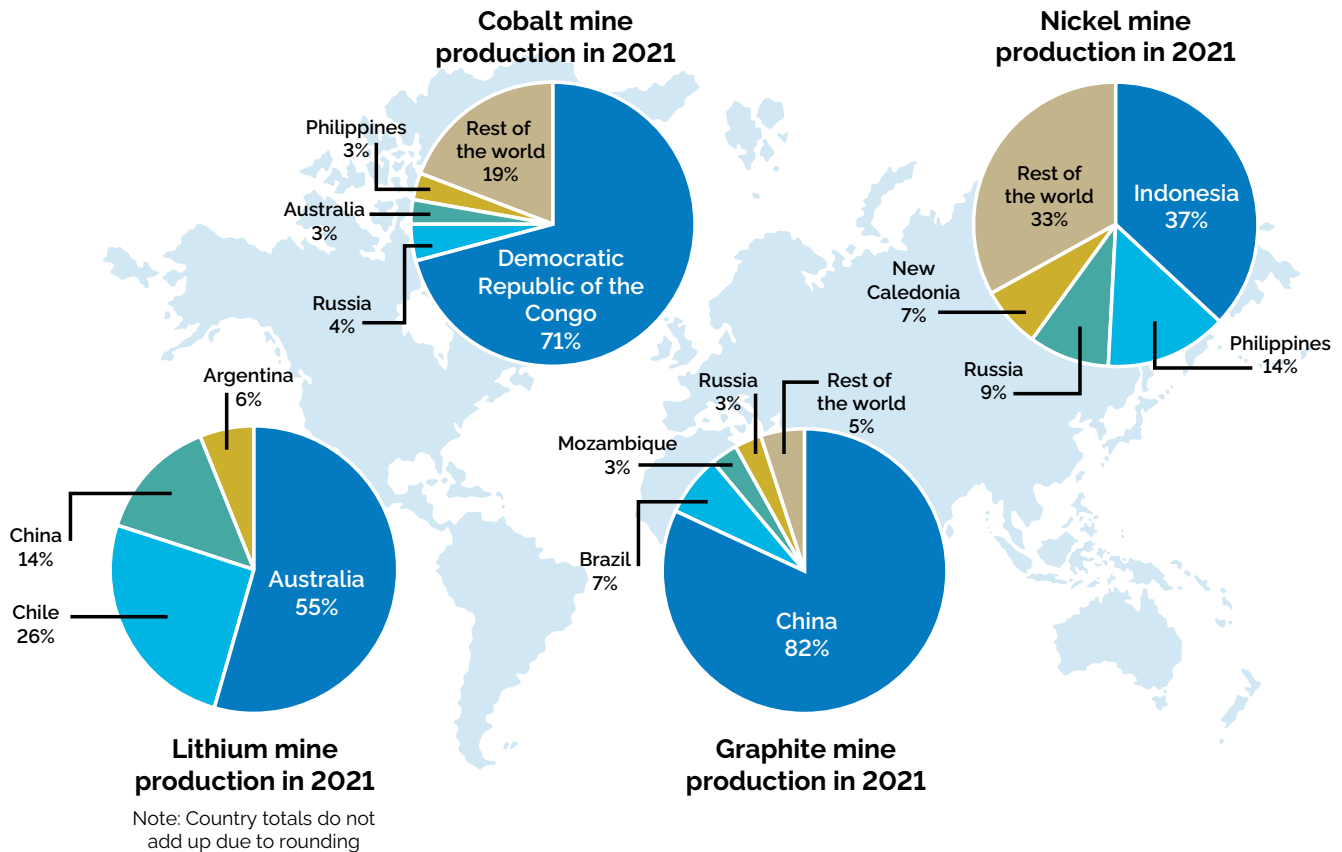
Critical minerals in Ontario

Ontario's vast and varied geology provides tremendous opportunity for critical minerals exploration and development. Ontario is a globally significant producer of critical minerals including nickel and cobalt and is home to several advanced lithium and graphite mineral development projects. Other critical minerals that have either been produced in the province, or that occur in deposits currently being developed, include barite, chromite, fluorspar, magnesium, molybdenum, niobium, phosphate and tungsten. These minerals are key components of stainless steel and other important building materials that contribute to economic growth.

The global supply chain issues that have taken root over the last couple of years and recent geopolitical conflicts demonstrate that, now more than ever, steps must be taken to ensure that we have the minerals and advanced materials required to continue transitioning to a more connected, cleaner and technology-driven economy. Currently, a great deal of global mine production and important mineral processing and refining capacity for critical minerals, such as those minerals and materials required to produce electric vehicle batteries, is concentrated in only a handful of jurisdictions outside of North America. Where and how critical minerals are mined, processed and refined is important to manufacturers and consumers. Ontario's exceptional mineral potential, supportive business climate and strong environmental and social governance fundamentals make the province a premier global destination for investment into critical minerals development.



Global supply for nickel, cobalt, lithium and graphite in 2021

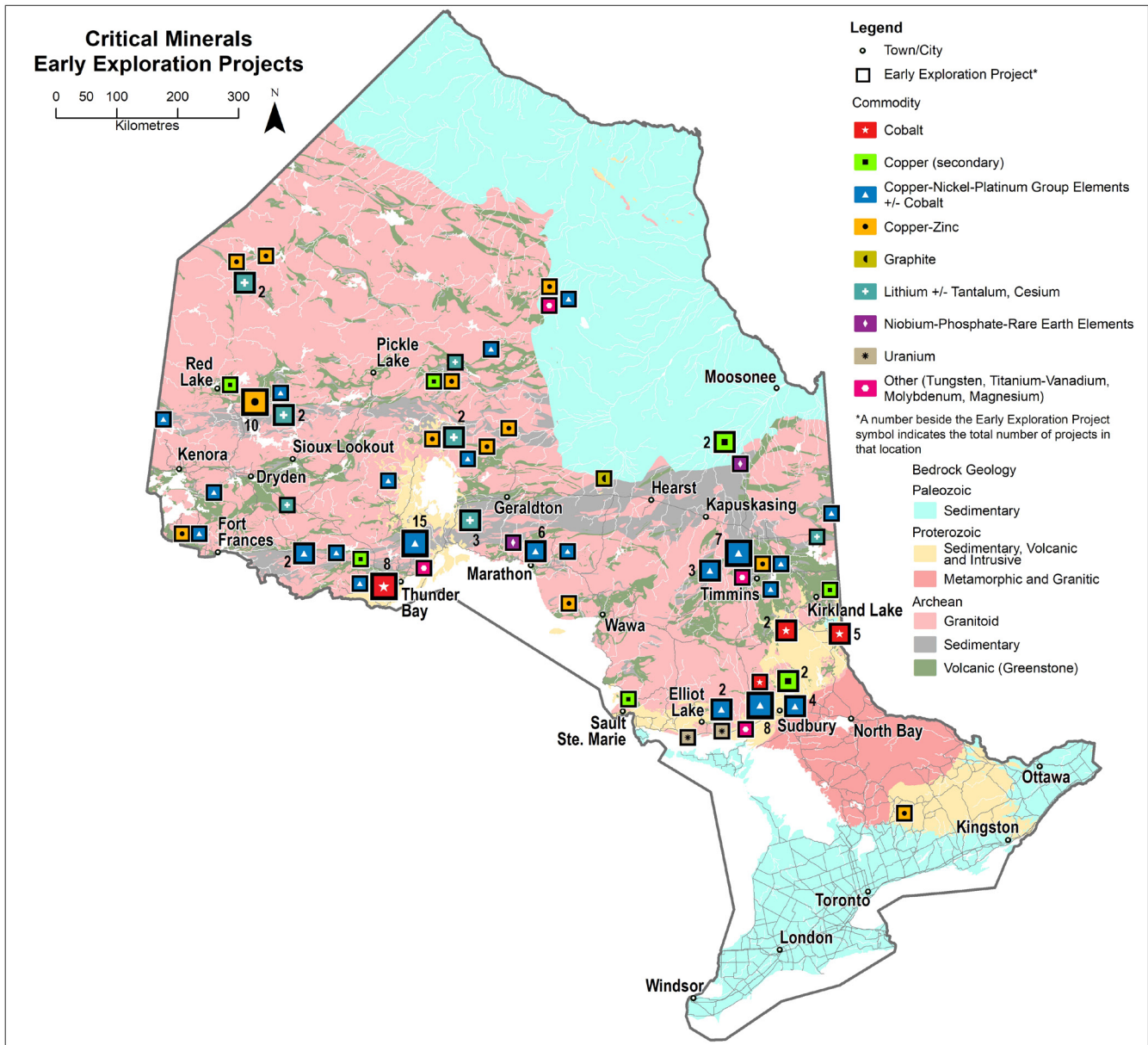


At the end of 2021, over 300,000 active mining claims were in good standing and more than 200 companies were exploring for minerals across the province, including exploration for critical minerals. Currently, Ontario has approximately 130 early exploration projects targeting critical minerals and an additional 16 advanced-stage projects. Ontario remains a premier destination of choice for exploration companies. In 2020, exploration companies spent a total of \$206 million on critical minerals exploration projects in the province.



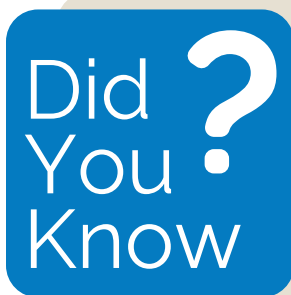
The Ontario Mining Association (OMA) provides regular, mining-focused, economic outlooks. The OMA's 2022 report assesses each of Ontario's critical minerals in terms of economic and strategic importance, their usage in priority technologies and sectors and market opportunities for Ontario.

Critical mineral early exploration projects currently underway in Ontario (as of March 2022)



In 2020, Ontario produced approximately \$3.5 billion in critical minerals. Nickel and platinum group elements had the highest production, valued at \$1 billion and \$1.4 billion respectively. Toronto is also home to the Toronto Stock Exchange (TSX) and TSX Venture Exchange, which raise global capital for critical minerals exploration and development projects and provide guidance on Environment, Social, and Governance disclosure, which is becoming a prominent consideration in capital markets.

Critical mineral significant projects and active mines in Ontario



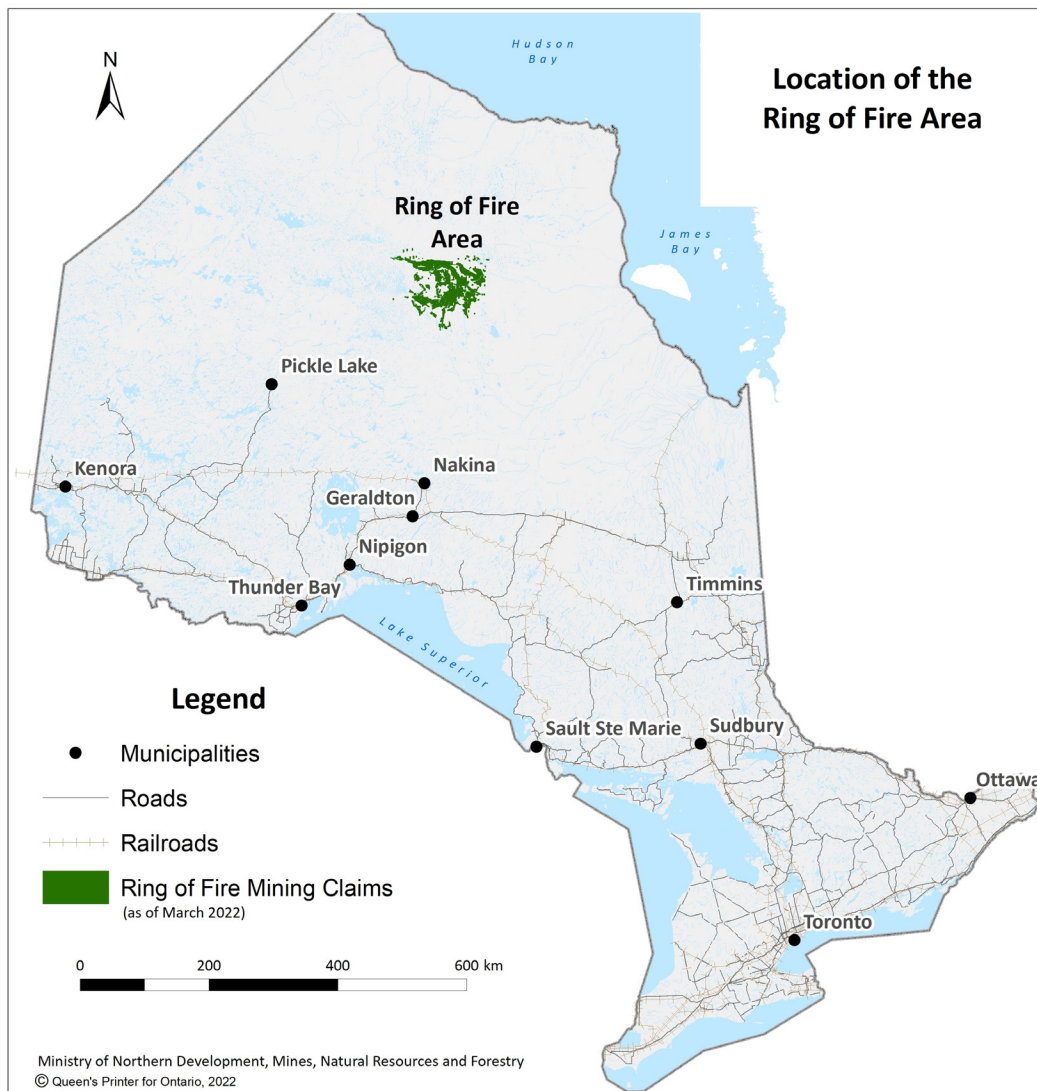
According to the Ontario Mining Association's Economic Report, Environmental and Social Governance (ESG) is the number one business risk for 2022. ESG is key to long-term growth and prosperity for Ontario's mineral sector moving forward.

Ring of Fire

Ontario's Ring of Fire is a transformative opportunity for unlocking multi-generational development of critical minerals. Located approximately 500 kilometres northeast of Thunder Bay, the area contains significant critical mineral deposits including nickel, copper, platinum and chromite.

Ontario continues to make progress on the "Corridor to Prosperity" leading to the Ring of Fire region by collaborating with First Nations partners on legacy infrastructure development in Northern Ontario. The government is supporting the priorities of individual First Nations, which see potential Ring of Fire developments as opportunities for prosperity. Together, this has led to significant progress.

Location of the Ring of Fire area



Marten Falls First Nation and Webequie First Nation are each leading provincial/federal Environmental and Impact Assessments for their proposed Marten Falls Community Access Road and Webequie Supply Road projects. These projects will support community objectives and provide improved, all-season access to the region. Both projects received approval on their Provincial Environmental Assessment (EA) Terms of Reference in October 2021 and the First Nations are now preparing their EAs accordingly. In May 2021, Marten Falls First Nation and Webequie First Nation started working together as proponents and commenced work on the EA Terms of Reference for the proposed Northern Road Link. This project would connect to a portion of the Marten Falls Community Access Road and the mineral deposits in the Ring of Fire.

Ontario has also made significant investments in high-speed Internet, road upgrades and community supports. Ontario has already committed close to \$1 billion to support these legacy road infrastructure projects that will connect First Nation communities to the Ontario highway network for the first time on the basis that federal contributions will match our commitment. These community-led northern road projects will benefit the entire region by improving access to social, health and education services; providing safer travel options; and reducing the price of food, fuel, and supplies.

The Ring of Fire is a priority project for Ontario and will support further critical minerals development.

Criteria for Ontario's critical minerals list

While there is no universally accepted definition of a critical mineral, it is commonly agreed that critical minerals have specific industrial, technological or strategic applications for which there are few viable substitutes. These minerals are economically important and can be subject to supply risk.

The criteria for minerals on Ontario's critical minerals list include:

- exploration and/or potential for development
- strategic importance to the economy
- application in end-uses for technologies that support the transition to a low-carbon economy
- global market demand

Mining, mineral processing and manufacturing companies, governments and the global marketplace need an up-to-date critical minerals list to inform mineral exploration and enable strategic investment decisions. Ontario will review its critical minerals list every three years to help reflect the demands of new technologies, changing markets and international investment priorities.

Ontario's critical minerals list

Mineral	Common Uses
Antimony	Metal products and fire-retardant material
Barite	Weighting agent, drilling fluids and X-ray shielding
Beryllium	Aerospace, industrial and medical technologies
Bismuth	Pharmaceuticals and metallurgy
Cesium	Atomic clocks and drilling fluids
Chromite	Stainless steel and alloys
Cobalt	Rechargeable batteries and superalloys
Copper	Electronics, plumbing and antimicrobial applications
Fluorspar	Chemical, cement, steel and glass production
Gallium	LEDs and integrated circuits
Germanium	Fibre optics
Graphite	Lubricants, batteries, and fuel cells
Indium	Fusible alloys, solders, electronics, LCD and thin-film application
Lithium	Rechargeable lithium-ion batteries, lubricant, glass and ceramics
Magnesium	Manufacturing, agricultural and industrial applications
Manganese	Steelmaking and batteries
Molybdenum	High-temperature superalloys
Nickel	Stainless steel and rechargeable batteries
Niobium	Electrolytic capacitors and high-tech alloys

Mineral	Common Uses
Phosphate	Fertilizer
Platinum Group Elements (PGEs)	Catalysts, catalytic converters and alloys
Rare Earth Elements (REEs)	Electronics, catalysts and magnets
Scandium	Aerospace alloys and fuel cells
Selenium	Rubber compounding, steel alloying and selenium rectifiers
Tantalum	Alloys and electrical capacitors
Tellurium	Photovoltaic solar cells and high-tech alloys
Tin	Alloys, coatings and construction material
Titanium	Aerospace alloys
Tungsten	Abrasives, alloys and electronics
Uranium	Nuclear fuel and life-saving medical isotopes
Vanadium	Aerospace alloys and redox-flow batteries
Zinc	Anti-corrosion agent in batteries and alloys
Zirconium	Fibre-optics, ceramics and abrasives


Pillars of Ontario's Critical Minerals Strategy

The success of Ontario's Critical Minerals Strategy depends on collaboration between government, industry, Indigenous peoples, communities and other stakeholders. Working together, the actions in this strategy will build a stronger, more resilient economy and revitalize local communities.

The strategy is comprised of six pillars, or areas of action for government, which will solidify Ontario's position as a global leader of responsibly sourced critical minerals. The pillars are:

1

Enhancing geoscience information and supporting critical minerals exploration



2

Growing domestic processing and creating resilient local supply chains



3

Improving Ontario's regulatory framework



4

Investing in innovation, research and development



5

Building economic development opportunities with Indigenous partners

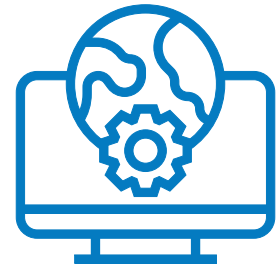


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Growing labour supply and developing a skilled labour force



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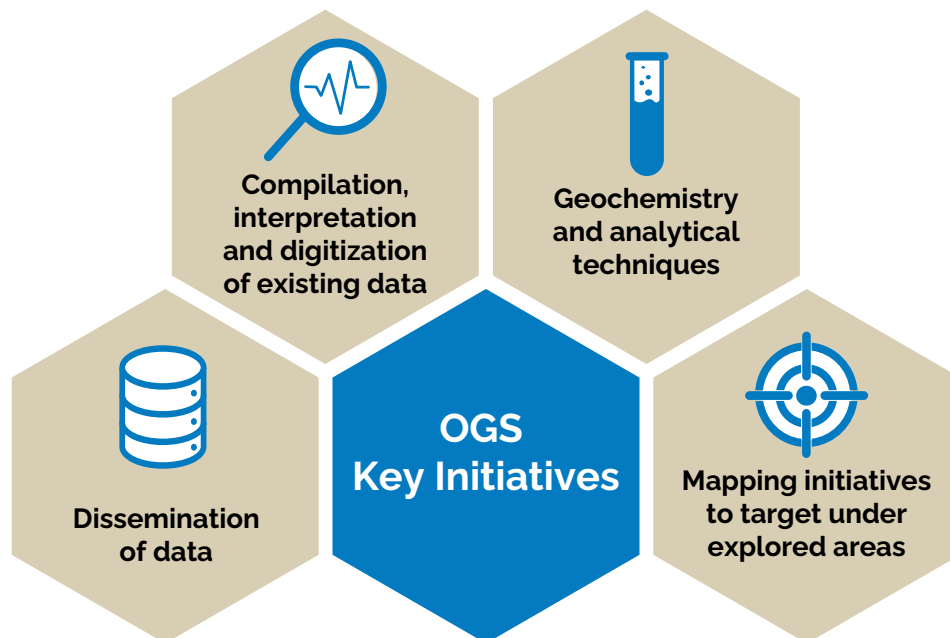


Enhancing geoscience information and supporting critical minerals exploration

High-quality, publicly available geoscience data plays an important role in driving investment in grassroots mineral exploration. New mineral discoveries help ensure that Ontario continues to be an important supplier of critical minerals.

Enhancing geoscience

For over a century, the Ontario Geological Survey (OGS) has been a leader in providing reliable and accessible public geoscience information. Data and information released by the OGS in the form of maps, reports, digital platforms and top-tier geoscience expertise are critical to discovering critical minerals in the province. The infographic below highlights some of the OGS's key initiatives that support critical minerals exploration and discovery.



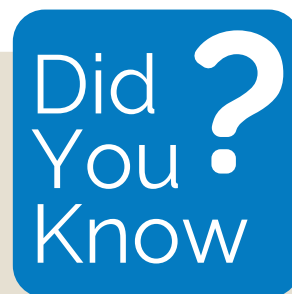
Over the last five years, the province has invested more than \$3.1 million in geological research, including geochemical and geophysical surveys, giving Ontario a competitive edge in attracting critical minerals investments.

Ontario heard from mineral exploration and mining stakeholders that to remain competitive, they need continued access to leading-edge geoscience information that drives the discovery of mineral deposits. Private sector investment decisions depend on access to this high-quality geoscience information.

Ontario's [Digital and Data Strategy](#) calls for a digital first approach to data management, and that includes making sure OGS data sets are available online to companies anytime, anywhere in the world. As part of Ontario's Critical Minerals Strategy, the OGS will continue providing products, publications, services and a suite of digital offerings to help identify critical minerals exploration opportunities.

To provide the best available information, Ontario is committed to:

- releasing innovative, new geospatial data products that provide quicker, easier access to OGS geoscience data through OGSEarth such as OGSFocus and OGS GeoData Listing
- introducing a modernized digital platform for mineral exploration companies to access Ontario's critical minerals geoscience information from anywhere in the world
- introducing new products that improve compilation and interpretation of existing OGS data, combined with digitizing archival information
- reassessing historical geoscience information to better identify critical minerals deposits
- undertaking new geoscience initiatives that target under-explored areas of Ontario in partnership with Indigenous communities where potential partnership opportunities may exist
- identifying, analyzing and quantifying critical minerals and gold deposits through enhanced geochemical analysis techniques and a mine waste sampling initiative — this will help identify critical minerals content in tailings and waste rock, which can support redevelopment of historic deposits



The OGS developed the new GeoData Listing interface to allow users to quickly and easily access all OGS maps and digital data products for a specific geographic area (such as a township or base map area).



Expanding incentives for critical minerals exploration and development

A business climate that helps attract mineral investment is essential to a strong critical minerals sector. Ontario already provides incentives that make this province attractive to mineral developers, including:

- a competitive corporate tax rate
- a mining tax rate that is on par with other Canadian jurisdictions and has a lower remote rate
- the Ontario [Focused Flow-Through Share \(OFFTS\) tax credit](#), which helps junior exploration companies access much-needed project capital

The OFFTS tax credit provides eligible individual shareholders with a refundable tax credit of 5% of eligible Ontario exploration expenses, harmonizing with the federal government's 100% bonus deduction and 15% investment tax credit. When combined with the federal tax credit, the OFFTS is estimated to reduce the after-tax cost of a \$1,000 investment in exploration by \$625 to \$375 for Ontario investors. Since 2011, 60% of mines that opened in Ontario were explored by junior exploration companies using OFFTS, leading to \$4.3 billion in mine construction capital costs.

Ontario heard that tax incentives stimulate private sector investment in mineral exploration and mine construction. Ontario also heard that mineral exploration at existing critical minerals mines needs to increase to meet future market demands for key commodities, such as nickel, copper, cobalt, zinc and PGEs.

Ontario is promoting a competitive business climate that will encourage early exploration, mineral development and mine construction through programs such as the [Ontario Junior Exploration Program \(OJEP\)](#), which helps exploration companies fund early-stage projects. In the first intake, OJEP funded 12 companies, with eight of them exploring for critical minerals.

To strengthen its competitive business climate, Ontario is committed to:

- ensuring exploration companies continue to have access to business support programs, such as the Ontario Junior Exploration Program (OJEP)
- promoting the Ontario Focused Flow-Through Shares (OFFTS) tax credit
- supporting the Government of Canada's efforts to expand the Mineral Exploration Tax Credit (METC) for materials on Canada's critical minerals list and making continued, targeted investments to encourage the development of critical minerals mining projects

Measuring success



Increased private sector investment in critical minerals exploration



Increased number of early exploration activities turned into advanced exploration activities



Increased utilization of critical minerals geoscience information by stakeholders

2



Growing domestic processing and creating resilient local supply chains

Supply chains are the integrated systems of organizations, people, activities, information and resources involved in supplying a product or service to a consumer. The concentration of the critical minerals supply chain in a few countries could expose Ontario's economy to the risk of disruption. Countries such as Japan, South Korea, China, Germany and Scandinavian countries have worked to establish critical minerals refining capacity as well as the required expertise and intellectual property to support advanced manufacturing and clean technology supply chains.

Encouraging further adoption of clean technologies is a key priority in Canada and the United States. The establishment of entire supply chains, such as in the electric vehicle and battery manufacturing sectors, is expected to create further demand and opportunity within the North American critical minerals mining and processing sector. Ontario's endowment in critical minerals can be leveraged to encourage domestic mining and processing that further anchor the high-value downstream activities in the electric vehicle supply chain. Ontario must build its capacity in chemical processing and battery component manufacturing to establish an integrated battery supply chain.

In support of the clean economy, there is a target amongst industry to make their supply chains carbon neutral. Most mines are connected to the Ontario power grid. Of the energy in the grid, 94% of electricity is produced from clean-energy sources. Ontario's clean grid allows for development of cleaner, lower-emissions mining compared to other jurisdictions.



Growing domestic processing

To achieve Ontario's goal of building complete, made-in-Ontario supply chains, the province needs to expand its capacity for critical minerals processing and refining. For example, electric vehicle batteries will require new or expanded domestic processing capacity for cobalt, nickel, graphite and lithium to feed this critical supply chain in Ontario.

Ontario currently has metal smelters and refineries that process several critical minerals, including nickel, copper, cobalt, platinum group elements, uranium, tellurium and selenium. Future demand will also include the need for additional processing capacity for the recycling of materials, including electric vehicle batteries and manufacturing wastes. These processing facilities have high energy consumption which can also impact their ability to remain competitive.

The chart below outlines the current smelting and refining facilities in Ontario. Minerals on Ontario's critical minerals list are noted with an asterisk.

Ontario smelting and refining facilities

Location	Operator/ Owner	Facility	Processed Materials
Blind River	Cameco Corp.	Refinery	Uranium* trioxide
Brampton	Asahi Refining Canada Ltd.	Refinery	Gold, silver
Copper Cliff	Vale Canada Ltd.	Smelter, refinery, plant	Nickel* (oxide, sinter, pellets, powder, sulphide), copper* cathodes, gold, silver, selenium* cake, tellurium* dioxide cake, platinum group elements* (in residues), sulphur dioxide, sulphuric acid
Ottawa	Royal Canadian Mint	Refinery	Gold, silver
Port Colborne	Vale Canada Ltd.	Refinery	Electrolytic cobalt*, platinum group elements* (in residues), cobalt* oxide
Port Hope	Cameco Corp.	Conversion facility	Uranium* (hexafluoride, dioxide, metals, alloys)
Sudbury	Glencore Canada Corp.	Smelter, plant	Nickel*-copper* matte containing cobalt*, gold, silver, platinum group elements*, sulphur dioxide, sulphuric acid

Recent provincial investments in processing capacity for cobalt and lithium are helping the province meet the needs of the North American and global marketplaces. Ontario will need further critical minerals processing and refining investments in priority supply chains to meet market demand. This will help Ontario achieve its goal of guaranteeing a reliable and uninterrupted future flow of critical minerals.

To expand the opportunities for domestic processing, Ontario is committed to:

- investing in Northern Ontario's development of battery minerals and providing supports for critical minerals processing through existing government programs, including those offered through the Northern Ontario Heritage Fund Corporation (NOHFC). For example, the NOHFC invested \$336,000 in Frontier Lithium's innovative extraction process for lithium and \$5 million in Electra Battery Materials, previously First Cobalt, to support domestic production of battery-grade cobalt sulfate
- investing \$250,000 to support the development of two new battery production lines at the Electra Battery Materials Corporation's future Battery Materials Park near Cobalt. The new production lines would be the first of their kind in Ontario and play a key part in supplying the demand for critical minerals that support the electric vehicle (EV) supply chain in North America
- supporting mining companies by providing an affordable and reliable supply of clean electricity for years to come

Creating resilient local supply chains

Supply chains include the transformation of natural resources and components into a finished product that is delivered to the end consumer. In sophisticated supply chain systems, products are returned into the supply chain after their use so that their residual value may be recycled.

As demonstrated by widespread shortages during the COVID-19 pandemic, reducing vulnerabilities in supply chains is more important than ever. Addressing these vulnerabilities will require building production capacity, expanding industrial hubs, creating synergies across sectors and promoting innovation. Tremendous opportunities exist to connect Ontario's mining sector with other high-growth industries, such as electric vehicle manufacturing, information and communications technology (ICT), energy, aerospace and defence, and health and life sciences.

Work is already underway to establish a supply chain for electric vehicle battery manufacturing in the province. This supply chain will connect two economic powerhouses in Ontario: mining and automobile manufacturing.

Reduced costs, improved technologies and socially conscious consumer trends are leading to higher demand for electric vehicles in markets around the world. According to [BloombergNEF's Electric Vehicle Outlook 2021](#), from passenger vehicles to battery-powered underground mining vehicles and mass public transit, investment and policy changes that support electric vehicles are helping accelerate the transition to a smaller carbon footprint.

Spotlight

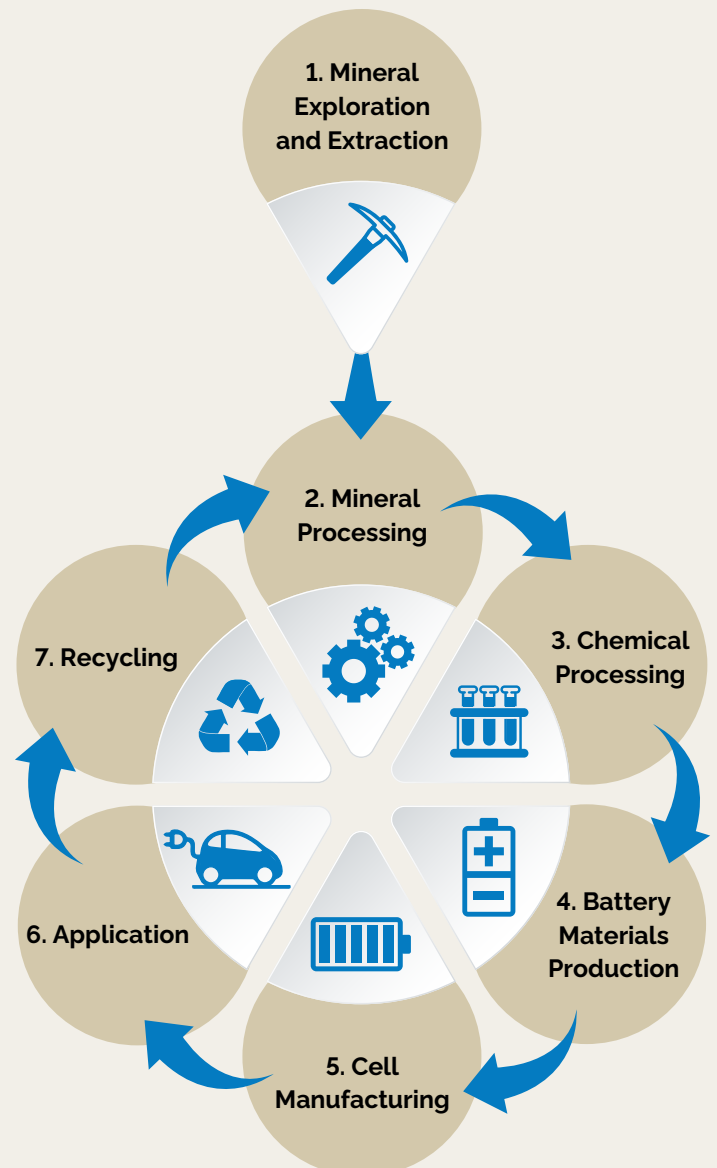
Ontario's battery supply chain

The battery supply chain begins with mineral exploration and extraction through to the recycling and reuse of minerals from batteries, playing an important and interconnected role in the manufacturing of electric vehicles.

Did You Know?

Black mass is an industry term used to describe a nickel, cobalt, manganese and lithium-rich material that can

be retrieved once a battery has been disassembled and shredded. These critical minerals can then be recycled into earlier stages of the supply chain.



Ontario's electric vehicle battery supply chain

Further supporting a commitment to a smaller carbon footprint, Ontario will prioritize the recycling of electric vehicle batteries and their minerals for reuse. Nickel, lithium, cobalt, manganese and graphite are essential in battery technology and copper is a mineral used in related infrastructure, such as electric motors and vehicle charging stations. Once the electric vehicle battery reaches the end of its life, the critical minerals that make up the battery components will be recovered and supplied back to industry to be used again in a new battery.

Companies have called on the province to foster connections between original equipment manufacturers and the mining sector, build networks for investment and establish partnership opportunities. As a result, Ontario is committed to:

- connecting original equipment manufacturers (OEMs), battery cell manufacturers, cathode producers, chemical processors and mining companies to fill gaps in Ontario's electric vehicle supply chain
- incentivizing refining, processing and recycling as part of a domestic battery supply chain linking the mining sector, Indigenous enterprises and other high-growth sectors through matchmaking services
- promoting Ontario's critical minerals advantage at trade shows and conferences

Enhancing access to government supports and services

Ontario has a suite of funding programs aimed at attracting new investment and supporting business growth, which complement programs offered by the federal government and municipalities.

Financial support and services offered through different agencies and ministries cover a wide array of business development needs and have varying points of entry. The Province of Ontario offers programs and incentives to help businesses during the start-up phase, as they grow their business, and to expand operations into Ontario. There are also programs to help offset operating costs.

Some examples are:

- [Northern Ontario Heritage Fund Corporation \(NOHFC\)](#) is an agency of the Ontario government with funding programs to support new business start-ups, business expansions and businesses looking to locate new operations in Northern Ontario from outside the province

- as part of the 2021 Budget, the government committed \$400 million over four years to create the Invest Ontario Fund, which will support [Invest Ontario](#) and encourage investments in the key sectors of advanced manufacturing, technology and life sciences
- the [Regional Development Program](#) is a coordinated approach to supporting business growth in Eastern and Southwestern Ontario. The Regional Development Program also delivers the Advanced Manufacturing and Innovation Competitiveness (AMIC) stream, which provides financial support to advanced manufacturing companies across Ontario to support capital investments, technology adoption and skills development

Ontario is committed to:

- helping companies maximize opportunities provided through government supports by helping them understand and access government funding and incentive programs
- working with municipalities to identify sites for development opportunities

Measuring success



Increase domestic processing of critical minerals in Ontario to support resilient domestic supply chains



Ensure critical minerals proponents know where to access government support and services



Increase business-to-business introductions along the full critical minerals supply chain through matchmaking services

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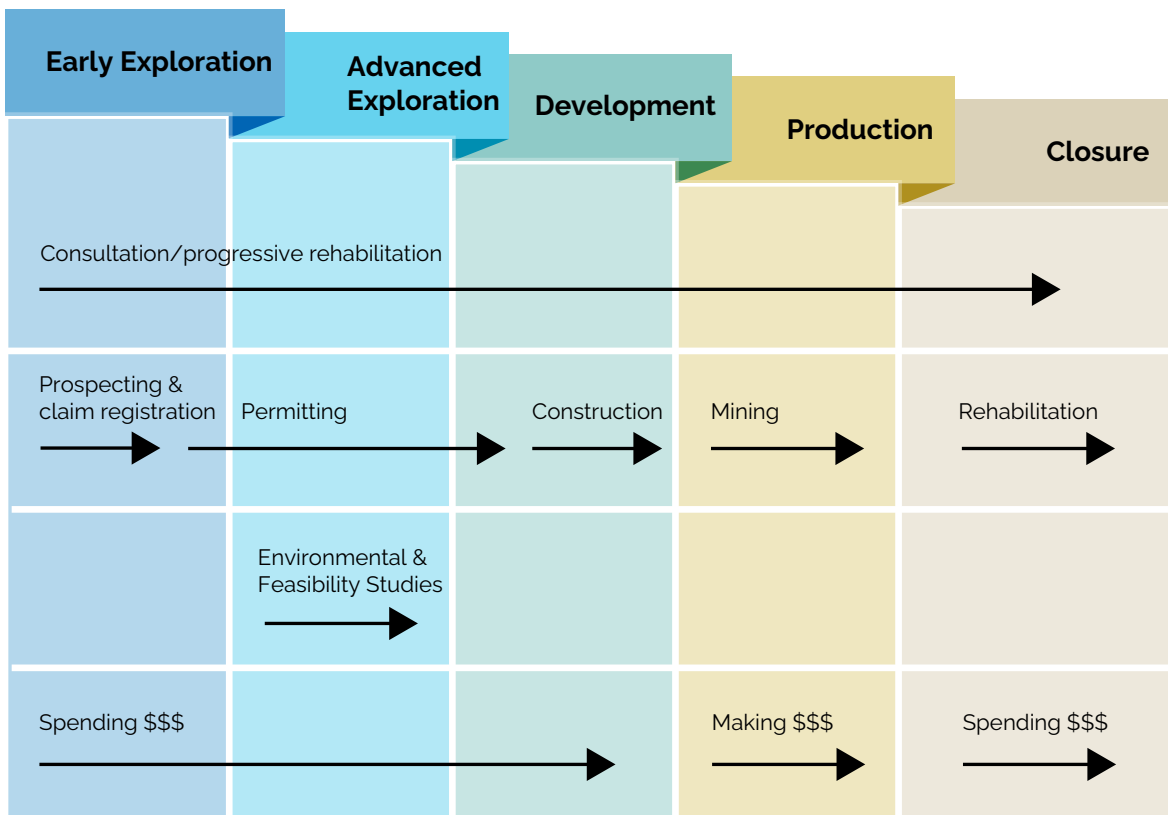


Improving Ontario's regulatory framework

Throughout the lifespan of a mining project, companies are subject to various provincial and federal legislation and regulations. Ontario is committed to an effective and efficient legislative and regulatory framework to attract global investment, expand the industry and create new jobs.

All mineral exploration and mining projects in Ontario, including critical minerals projects, move through a mining sequence that begins with claim registration, continues with early exploration, advanced exploration and mine development, and ends with rehabilitation and closure.

Ontario's mining sequence



Strengthening regulatory competitiveness and coordination

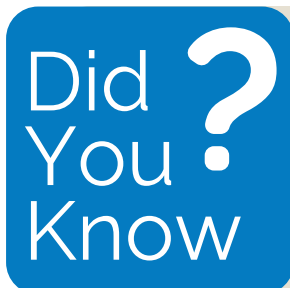
The Mining Act is the provincial legislation that governs and regulates projects as they move through the mining sequence. The regulatory regime is designed to be responsive, streamlined and effective in a manner consistent with the recognition and affirmation of existing Aboriginal and treaty rights in [section 35 of the Constitution Act, 1982](#), including the duty to consult, while not compromising public health, safety and the environment. Depending on the stage of the project, proponents will be subject to other provincial and federal legislation and regulations in addition to the requirements of the Mining Act.

Ontario has heard that a coordinated, graduated regulatory approach that supports proponents throughout the mining sequence is necessary to ensure regulatory competitiveness. This ensures the regulatory burden for industry is proportional to the level of environmental impacts of a specific project. Ontario also heard that smaller mineral exploration and development projects need a regulatory framework that is efficient and consistent with the scale of proposed activities.

Ontario is taking action to ensure that its approach to the mining sequence remains scalable, flexible and efficient, without compromising rigorous review and due diligence.

Ontario has amended the Mining Act and its regulations to create:

- a 45-day regulatory timeframe for processing closure plan amendments to deliver timely closure planning decisions for proponents
- a public registry to make information about licences of occupation available online that aligns with Ontario's Open Data and Digital First directives
- a "permit by rule" model to allow claim holders to sell the end product of a bulk sample and retain proceeds, without a separate approval, provided certain conditions are met
- the ability for holders of all forms of mining land tenure with the same opportunity to sell the end product of testing without moving to mine production, reducing administrative burden



Ontario has a **One Window Coordination Process (OWCP)** for major mining projects. The OWCP provides a coordinated and efficient regulatory process for reviewing, permitting and decision-making where multiple permits and approvals are required from more than one ministry or level of government.

Ontario has also changed the name and created guidance for Regulation 240/00. These changes clarify closure plan requirements demonstrating that the requirements through the mining sequence are gradual, scalable and proportional to the activities and impacts associated with each project. These changes help to build a competitive regulatory framework for all minerals, including critical minerals.

Ontario is committed to continuing to improve its regulatory framework for projects. The province is:

- considering the development of regulatory pathways specifically for lower impact mining projects (to help accomplish this, Ontario released a policy proposal on the Environmental Registry of Ontario which outlines the ministry's preliminary thinking)
- increasing transparency in decision-making criteria by making additional public-facing guidance available to assist proponents in navigating through regulatory processes
- providing project management support and inter-ministry coordination for regulatory approvals for critical minerals projects in Ontario



Encouraging mineral recovery from mining waste

Mining is becoming cleaner as new technologies reduce environmental impacts across the mining sequence. The push towards a green economy and net-zero greenhouse gas emissions means that mining will continue to keep pace with changing environmental, social and regulatory requirements and expectations.

In Ontario, many companies are interested in extracting additional value from mining wastes and are seeking innovative ways to reprocess and recycle different end-use products. To facilitate mineral recovery, Ontario amended the Mining Act in 2021 to introduce a new recovery permit. This will allow for the reprocessing of mining wastes like tailings and waste rock, while also improving public health, safety and the environment, without the requirement to file a mine production closure plan or obtain a mining lease.

To implement this mineral recovery program, Ontario is committed to:

- developing a regulatory framework for recovery of minerals from mine tailings and waste, following the amendment to the Mining Act
- supporting mineral recovery opportunities where possible
- exploring innovative solutions for rethinking mining wastes
- coordinating the new framework with other federal and provincial regulatory requirements

Measuring success



Reduce burden and realize cost savings for the mineral development sector in the regulatory framework



Reduce the time an application takes in government processing



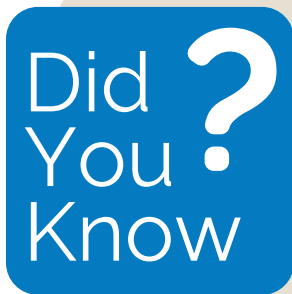
Increase clarity on regulatory requirements and application processes for project proponents/applicants

4



Investing in critical minerals innovation, research and development

Ontario is enhancing its position as an innovation hub where cutting-edge technologies are supporting various industries, including mining. Not only are mineral exploration and development companies producing the materials that are being used for critical technologies in high-growth sectors, but the mining sector itself is also becoming more technologically advanced.



Mining technology and innovation is an important driver of productivity growth and improvement in health and safety. According to the Ontario Mining Association's (OMA's) Economic Report, over 40% of OMA members are using some form of advanced technology and mining companies in Ontario have noticeably higher rates of adoption for energy storage and energy-efficient transportation technologies.

Supporting innovation and research and development

Today's mining industry has rapidly evolved into a high-tech industry. Innovative ideas such as remote mining are helping companies access resources deeper below the earth's crust and in more remote, inaccessible areas than ever before. Continued investment in research and development (R&D) today will help to support the evolution into the mining industry of the future.

The Ontario mining sector is a leader in clean technology applications, such as electric vehicles and mine waste remediation. Several mining companies operating in Ontario have pledged to become non-emitting sources of carbon and other harmful gasses by 2050. Ontario's critical minerals producers are increasingly adopting electric mobile mining equipment to replace the use of diesel equipment in their underground mines. Glencore's Onaping Depth Mine project is under construction and expected to be in operation by 2025 and will use real-time remote management, monitoring and control from the surface. The entire fleet of mining equipment will feature battery-powered electric vehicles, eliminating diesel emissions and reducing noise pollution.

Stakeholders have indicated that critical minerals research and development must be a provincial priority to ensure a steady stream of critical minerals projects that are in various stages of development. Research projects need to tackle problems such as mining at depth in existing mines with the goal of keeping mines in operation longer, the successful extraction of minerals from mine wastes to minimize the environmental footprint, and technology that supports the recycling of electric vehicle batteries.

To support further innovation and research and development, Ontario is committed to:

- improving mineral recovery from electric vehicle batteries, including black mass recycling and other manufacturing wastes
- supporting the recovery of residual metals and minerals from tailings and other mine wastes
- exploring how to support deep mining to facilitate exploration and production at depth
- prioritizing research projects related to critical minerals and electric vehicle batteries to qualify for the [Ministry of Colleges and Universities' \(MCU\) Ontario Research Fund: Research Excellence](#)
- exploring how to support R&D and access to and/or development of intellectual property related to critical minerals processing for high value applications including electric vehicle batteries
- exploring new options for incentivizing critical minerals research and development and connecting the critical minerals sector with intellectual property-related support services
- highlighting the programs at the Northern Ontario Heritage Fund Corporation that can be leveraged by companies looking to research and prove out innovative new mining and processing techniques

Ontario is also supporting the establishment of a Regional Technology Development Site in Northern Ontario. The site will be focused on electric vehicle battery technologies led by the [Ontario Vehicle Innovation Network \(OVIN\)](#). The OVIN promotes advanced automotive technologies, such as connected and autonomous vehicles (C/AVs) and electric and low-carbon vehicles. This site will serve as a location to test, pilot and support the commercialization of technologies by supporting prototyping and testing, and by encouraging collaboration between researchers and industry.

Fostering collaboration

Ontario's innovative mining sector enjoys a global reputation for industry expertise, leading-edge post-secondary institutions, and researchers working to make mining safer, greener, more productive and cost-efficient. Across the province, academics and applied researchers are developing new techniques and applications to support mining innovation. This includes:

- recovering rare earth elements from e-waste and post-consumer products
- developing novel methods of hydrometallurgical processing of materials, including microwave-assisted grinding and sorting
- using machine learning in mineral processing and exploration

To foster collaboration, we must build networks that connect critical minerals companies and Ontario post-secondary institutions to develop applied research and commercialization projects. This will include creating networking opportunities for the early-stage elements of battery and other critical minerals supply chains.

Ontario is already home to cutting edge mining research and development organizations. Sudbury-based NORCAT has underground facilities where companies can develop and test new technologies in an operating mine setting while also training their workforces. The Centre for Excellence in Mining Innovation (CEMI), also headquartered in Sudbury, recently partnered with organizations across Canada to launch the Mining Innovation Commercialization Accelerator (MICA) network for mining innovators. This \$112-million pan-Canadian initiative will accelerate the commercialization of new technologies to make the mining sector more productive and sustainable.



To further encourage R&D, Ontario is committed to:

- collaborating with start-ups and large technology companies working to develop recycling methods for critical minerals and precious metals
- creating opportunities for researchers, industry representatives and government to network and create collaborative research opportunities
- building mineral testing capacity and small-scale processing to support early-stage critical minerals projects, through collaboration with post-secondary institutions and critical minerals producers

Measuring success



Creation of additional tools and resources to support critical minerals companies in accessing intellectual property support services



Increased uptake for government programs related to critical minerals research and development



Creation of additional opportunities for industry and post-secondary institutional partnerships related to critical minerals

5



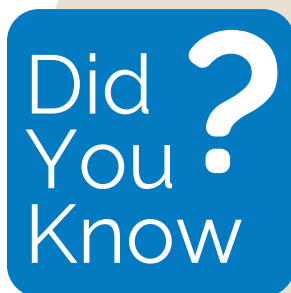
Building economic development opportunities with Indigenous partners

Collaborating on resource development projects can advance reconciliation with Indigenous communities and people. Many resource development projects provide socio-economic benefits to Indigenous communities.

Working together, Indigenous partners, industry and governments share in the benefits from local projects and broader regional initiatives. Ontario is supporting actions to increase the capacity of Indigenous communities and their members to participate in, and benefit from, resource development through skills training, business and economic development.

Sharing benefits from resource development

Ontario shares the economic benefits from resource development with Indigenous communities through [Resource Revenue Sharing \(RRS\) agreements](#). Resource revenue sharing supports reconciliation with Indigenous people, as well as economic and resource development at the local level. Ontario currently has three RRS agreements in place with Grand Council Treaty #3, Wabun Tribal Council and Mushkegowuk Council, representing 35 First Nations. Since 2018, these agreements have resulted in Ontario sharing over \$93 million from mining tax revenues and royalties and forestry stumpage revenues with participating First Nations.



According to the [Ontario Mining Association's Economic Report](#), as of 2020, there were 142 active agreements in place between Indigenous communities and mining companies across Ontario. These agreements formalize mutually beneficial relationships between Indigenous communities and the province's mining industry.

Funding through these agreements is currently enhancing education and health care services in First Nation communities, creating new economic development opportunities that bring good-paying jobs to the region and supporting community and cultural priorities that help strengthen local planning and decision-making. First Nations have used the funding under the RRS agreements to hire new staff in their economic development department, install a new playground and build new lots for community housing. The funding has also been used to hire community coordinators to consult with members on governance, invest in economic development and build capacity by hiring new workers to help with their business corporation.

Ontario is committed to sharing the benefits of resource development under the existing RRS agreements. In fall 2021, Ontario engaged Indigenous organizations to expand RRS agreements to other Indigenous communities and add aggregate royalties to the list of revenues available for sharing under the agreements. This will further share Crown revenues from mining tax revenues and royalties, forestry stumpage and aggregate royalties.

Enhancing capacity and supporting Indigenous businesses

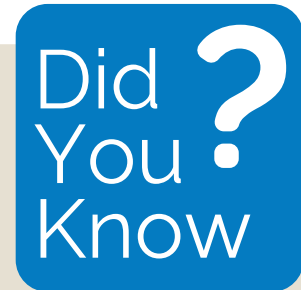
Critical minerals represent a new opportunity for Ontario and Indigenous partners to work together. This includes sharing information, providing supports to facilitate greater Indigenous participation in development and expanding business opportunities with Indigenous partners across critical minerals supply chains.



Ontario provides support through the Aboriginal Participation Fund (APF), a \$4.7-million annual fund that supports the capacity of communities to participate in Aboriginal consultation, as well as education and relationship-building activities related to mineral exploration and development. The fund has three streams which support Mineral Development Advisors, values mapping projects and Indigenous-led technical and advisory tables. The APF is creating new opportunities to build and strengthen relationships among Indigenous communities, government and industry.

Indigenous people and communities across the province have developed businesses and corporations that provide services to the mining sector. There are many important contracting opportunities that flow from mineral exploration and mining projects and Indigenous businesses often secure these contracts for economic development. Many mining companies already have policies in place to create a diverse workforce. These policies support and promote the hiring of Indigenous people and prioritize opportunities for Indigenous-owned businesses. The Ontario government also procures goods and services from Indigenous-owned businesses and will continue to strengthen opportunities for these businesses to provide supplies and services in the province.

Through programs offered by NOHFC, Ontario is supporting the participation of Indigenous-owned businesses in delivering professional services to the mining sector. This is an important and continuing step in reconciliation and partnership.



First Nation, Métis and Inuit people live in Ontario. Seventy-eight per cent of the 133 First Nation communities in Ontario are located in the North, with one in four of those being a remote community, accessible only by air or by seasonal winter road.

While some Indigenous-owned businesses currently participate in and benefit from mineral exploration and development, more work is needed to expand opportunities. Ontario's goal is to see more Indigenous-owned businesses participate in mineral exploration and development activities and critical minerals supply chains. To support this, Ontario is committed to:

- ensuring Ontario's current funding programs include supporting critical minerals education and capacity building within Indigenous communities
- promoting programs that support Indigenous-owned business, workforce and skills development
- developing educational tools in collaboration with Indigenous partners to foster a better understanding of critical minerals opportunities and benefits
- strengthening relationship processes with Indigenous partners to ensure a continued critical minerals dialogue
- enhancing opportunities for Indigenous communities to prosper from resource development and supply chain opportunities

Measuring success



Increase the number of Resource Revenue Sharing agreements in place



Increase opportunities for Indigenous businesses to participate in critical minerals exploration, development and supply chains

6

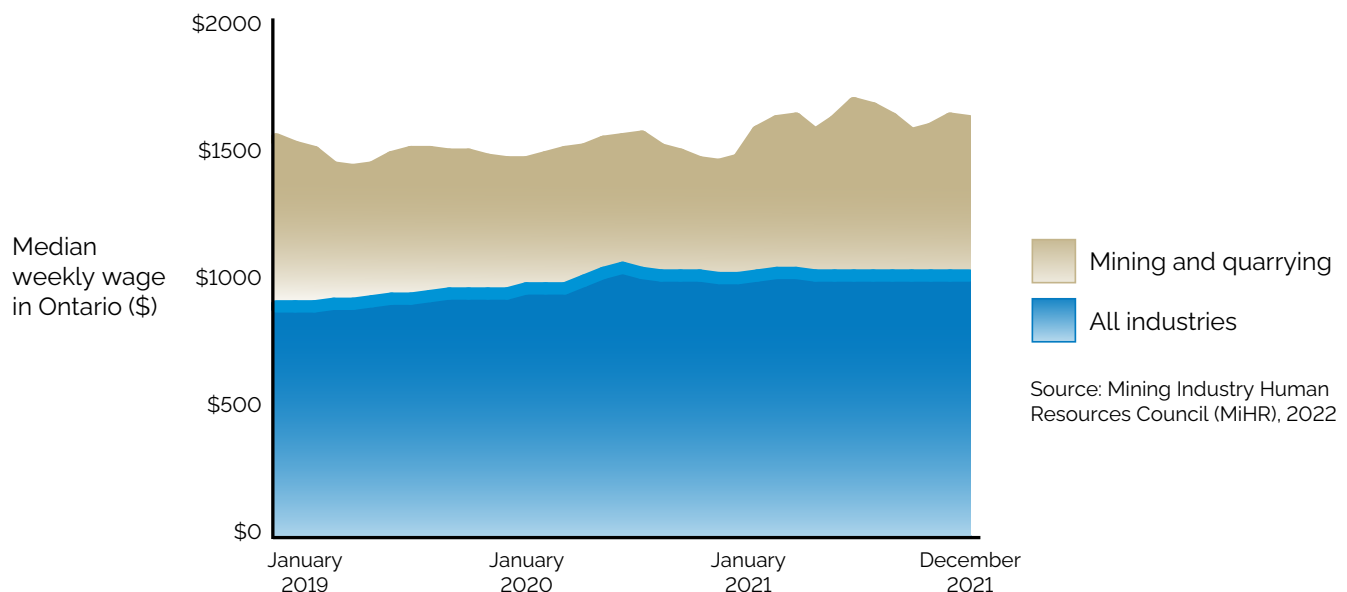


Growing the labour supply and developing a skilled labour force

Ontario is home to a world-class labour force. In the mining sector, this includes geologists, engineers, drillers and underground experts. Mining companies are also increasingly hiring more skilled workers to operate sophisticated technology, employing more computer scientists, data analysts, programmers and technologists of all disciplines.

Mining in Ontario supported more than 28,000 direct jobs and approximately 47,000 indirect jobs associated with mineral processing and mining supplies and services in February 2022. As illustrated in the graph below, according to the [Mining Industry Human Resources Council \(MiHR\)](#), and [Statistics Canada's Labour Force Survey](#), in 2021, the average median weekly wage in Ontario's mining and quarrying sector was approximately \$1,600, which was 60% higher than the average of approximately \$1,000 for all industries combined.

Median weekly wage in Ontario



[MiHR](#) indicates that mining is recognized as the largest private sector employer of Indigenous people in Canada, with Indigenous employment accounting for approximately 10% of employment in Ontario's mineral sector in January 2022. Two-thirds of Ontario mining production and exploration jobs are located in Northern Ontario.

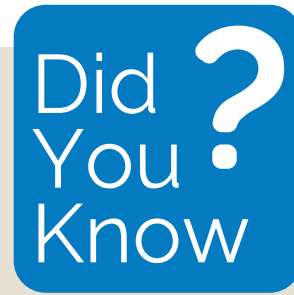
Growing the labour force

Experts forecast labour market pressures in the mining sector and national estimates suggest that by 2025 the mining industry will need to hire between 30,000 to 48,000 workers to fulfill the labour needs of the industry. According to the [MiHR National Outlook 2021](#), employers report that occupations in production, followed by those that are technical and in the trades will experience the highest staff turnover in mining.

The growing Indigenous population in Ontario and the proximity of Indigenous communities to many mineral development projects provide an opportunity to increase Indigenous participation in the sector and enhance the sector's labour supply. Immigration also plays an important role in Ontario's labour supply and could be leveraged to attract skilled workers to the critical minerals sector.

Ontario has several existing programs that attract and retain talent to grow the diverse labour force and meet current and future employer needs. The [Ontario Immigrant Nominee Program \(OINP\)](#) is the province's economic immigration program. It works in partnership with the Government of Canada through Immigration, Refugees and Citizenship Canada (IRCC). Foreign workers, international students and those with the right skills, experience and education can apply to the OINP for a nomination. The OINP recognizes and nominates people for permanent residence who have the skills and experience the Ontario economy needs.

In 2021, Ontario partnered with Indigenous communities and industry by investing \$3.6 million in an [Indigenous Workplace Development Program](#). Through the Ministry of Labour, Training and Skills Development's Skills Development Fund, 150 Indigenous community members received training to support the construction and operation of the new Equinox Gold Greenstone Project in Geraldton, Ontario. Led by Minodahmun Development LP, the program focuses on helping members of Indigenous communities, including women, youth and people with disabilities, prepare for apprenticeships in construction and mining trades.

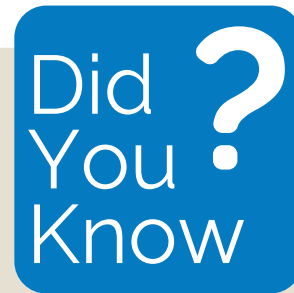


According to the [Ontario Mining Association's \(OMA's\) 2022 Economic Report](#), the average contribution in terms of gross domestic product (GDP) per OMA member employee in 2019 was \$337,000. This is roughly three times the average across all industries in Ontario.

Ontario's [Skills Development Fund \(SDF\)](#) offers funding to organizations for innovative projects that address challenges to hiring, training or retaining workers, including apprentices, during the pandemic. The SDF offers funding to support market-driven solutions that help people and businesses make it through the pandemic successfully. These solutions may also lead to lasting improvements to cross-sector employment and training in Ontario. Projects can also receive funds for designated support for workers and job seekers with disabilities and mental health support for participants.

To meet growing labour force demands, Ontario is committed to:

- supporting local employment development and human resource planning through financial assistance available to local communities, sector groups, employee/employer associations and employers
- partnering with the Chiefs of Ontario to establish a First Nations Economic Growth and Prosperity Table to support economic advancement and well-being for First Nation communities
- working with the Government of Canada to maintain pathways for foreign workers and international students to apply for permanent residence including through the Ontario Immigrant Nominee Program (OINP)
- helping highly skilled, internationally trained immigrants obtain employment in which they were trained through the Ontario Bridge Training Program



In 2019, according to the 2022 Ontario Mining Association's Economic Report, OMA member mines provided nearly 3,000 jobs with average annual earnings of over \$87,000 to Indigenous community members.

Enhancing training pathways

New pathways for training and employment are needed to increase the mining sector's labour force. Technology, diversity and inclusion are also dominant forces that will shape the next generation of workers in the mining sector. Women and immigrants are underrepresented in the mining sector. According to the [MiHR's Interactive Labour Market Dashboard](#), a monthly analysis of employment data, in January 2022:

- women make up approximately 48% of the Ontario workforce, but only about 31% of the mining workforce
- immigrants make up over 36% of Ontario's workforce, but only about 15% of Ontario's mining workforce
- although the share of Indigenous employment in Ontario's mining workforce is higher compared to other industries, opportunities exist to grow participation in the mining sector

College and university graduates and apprentices are key resources for filling different roles in the critical minerals sector. The province needs to broaden the scope and delivery of such programs to meet the evolving needs of the sector.

Ontario is home to top-tier post-secondary institutions, including Indigenous-led organizations. These institutions have demonstrated leadership in creating mining programs that respond to employer needs, while providing learners with practical and cooperative education and on-the-job training.



To enhance training pathways, Ontario is committed to:

- supporting industry efforts to attract and train underrepresented workers
- promoting careers in the mining sector to encourage enrollment in mining curriculum, skilled trades and training programs
- working with post-secondary institutions, including Indigenous institutes and the private sector, to leverage labour force training and skills development programs and support culturally appropriate, experiential and cooperative training opportunities for students
- addressing skilled trade shortages by clearly identifying the in-demand trades and working with the Ministry of Labour, Training and Skills Development to target funded apprenticeship programs to build the pipeline of skilled trades workers
- supporting employment and training partnerships working with the Ministry of Labour, Training and Skills Development to identify employment and training programs to develop job-ready, skilled workers that meet the workforce needs of employers
- funding several initiatives to support the development of [micro-credentials](#)

Measuring success



Create additional opportunities for Indigenous people, immigrants and women to participate and work in Ontario's critical minerals supply chains and mineral supply and services sector



Increase educational opportunities (such as micro-credentials, certifications and training programs) that support labour development relating to critical minerals supply chains

Moving Forward

The Critical Minerals Strategy will continue to evolve and new initiatives will be included to ensure Ontario captures its rightful share of this growing global market. Over the next five years, government actions and targeted investments will reinforce the province's global reputation as a leader in responsible and sustainable mineral development.

Engagement on this strategy will continue. Bringing partners together to review progress and chart future opportunities will ensure that the critical minerals potential for this province is fully realized. The province will review its critical minerals list within three years to ensure it remains in alignment with the needs of a sector that operates in an ever-changing and dynamic environment.



Appendix A

Engagement summary

Ontario completed significant engagement on the Critical Minerals Strategy in 2021. Three public virtual engagement sessions had a total of 164 registrants with a wide spectrum of participants, including industry, prospectors, researchers, Indigenous Leaders and communities, chambers of commerce and other interested organizations and groups. Further meetings were held with First Nations and Métis organizations, chambers of commerce, industry trade show participants, businesses involved in the sector and Ontario trade officials working in the United States, including:

- United States Agents General
- United States Heads of Mission
- State of Mining: Timmins Chamber of Commerce
- Canada Silver Cobalt Works
- Sessions at The Big Event – Canadian Mining Expo (Timmins)
- Anishinabek Nation Regional Roundtables (Northern Superior, Lake Huron, and Southeast/Southwest Regions)
- Grand Council Treaty #3 – Territorial Planning Unit
- Wabun Tribal Council
- Métis Nation of Ontario
- Community consultation liaison officers and mineral development advisors
- Canadian Manufacturers and Exporters Association
- Minister's Mining Working Group
- Fox River Resources

The ministry also posted its [Critical Minerals Framework Discussion Paper](#) on the Environmental Registry of Ontario (ERO) on March 10, 2021. The ERO posting received comments from 21 unique contributors and the ministry also received 17 written submissions by email. Feedback was wide-ranging and comprehensive, covering all aspects of the Critical Minerals Framework Discussion Paper and its proposed key pillars.

Summary of strategy commitments

Pillar	Area of focus	Ontario's commitments
<p>Enhancing geoscience information and supporting critical minerals exploration</p>	<p>Enhancing geoscience</p>	<ul style="list-style-type: none"> releasing innovative, new geospatial data products that provide quicker, easier access to OGS geoscience data through OGSEarth such as OGSFocus and OGS GeoData Listing introducing a modernized digital platform for mineral exploration companies to access Ontario's critical minerals geoscience information from anywhere in the world introducing new products that improve compilation and interpretation of existing OGS data, combined with digitizing archival information reassessing historical geoscience information to better identify critical minerals deposits undertaking new geoscience initiatives that target under-explored areas of Ontario in partnership with Indigenous communities where potential partnership opportunities may exist identifying, analyzing and quantifying critical minerals and gold deposits through enhanced geochemical analysis techniques and a mine waste sampling initiative — this will help identify critical minerals content in tailings and waste rock, which can support re-development of historic deposits

Pillar	Area of focus	Ontario's commitments
<p>Enhancing geoscience information and supporting critical minerals exploration</p>	<p>Expanding incentives for critical minerals exploration and development</p>	<ul style="list-style-type: none"> ensuring exploration companies continue to have access to business support programs, such as the Ontario Junior Exploration Program (OJEP) promoting the Ontario Focused FlowThrough Shares (OFFTS) tax credit supporting the Government of Canada's efforts to expand the Mineral Exploration Tax Credit (METC) for materials on Canada's critical minerals list and making continued, targeted investments to encourage the development of critical minerals mining projects
<p>Growing domestic processing and creating resilient local supply chains</p>	<p>Growing domestic processing</p>	<ul style="list-style-type: none"> investing in Northern Ontario's development of battery minerals and providing supports for critical minerals processing through existing government programs, including those offered through the Northern Ontario Heritage Fund Corporation (NOHFC) investing \$250,000 to support the development of two new battery production lines at the Electra Battery Materials Corporation's future Battery Materials Park near Cobalt. The new production lines would be the first of their kind in Ontario and play a key part in supplying the demand for critical minerals that support the electric vehicle (EV) supply chain in North America supporting mining companies by providing an affordable and reliable supply of clean electricity for years to come

Pillar	Area of focus	Ontario's commitments
<p>Growing domestic processing and creating resilient local supply chains</p>	<p>Creating resilient local supply chains</p>	<ul style="list-style-type: none"> • connecting original equipment manufacturers (OEMs), battery cell manufacturers, cathode producers, chemical processors and mining companies to fill gaps in Ontario's electric vehicle supply chain supply chain • incentivizing refining, processing and recycling as part of a domestic battery supply chain linking the mining sector, Indigenous enterprises and other high-growth sectors through matchmaking services • promoting Ontario's critical minerals advantage at trade shows and conferences
<p>Growing domestic processing and creating resilient local supply chains</p>	<p>Enhancing access to government supports and services</p>	<ul style="list-style-type: none"> • helping companies maximize opportunities provided through government supports by helping them understand and access government funding and incentive programs • working with municipalities to identify sites for development opportunities
<p>Improving Ontario's regulatory framework</p>	<p>Strengthening regulatory competitiveness and coordination</p>	<ul style="list-style-type: none"> • considering the development of regulatory pathways specifically for lower impact mining projects (to help accomplish this, Ontario released a policy proposal on the Environmental Registry of Ontario which outlines the ministry's preliminary thinking) • increasing transparency in decision-making criteria by making additional public-facing guidance available to assist proponents in navigating through regulatory processes • providing project management support and inter-ministry coordination for regulatory approvals for critical minerals projects in Ontario

Pillar	Area of focus	Ontario's commitments
Improving Ontario's regulatory framework	Encouraging mineral recovery from mining waste	<ul style="list-style-type: none"> • developing a regulatory framework for recovery of minerals from mine tailings and waste, following the amendment to the Mining Act • supporting mineral recovery opportunities where possible • exploring innovative solutions for rethinking mining wastes • coordinating the new framework with other federal and provincial regulatory requirements
Investing in innovation, research and development	Supporting innovation and research and development	<ul style="list-style-type: none"> • improving mineral recovery from electric vehicle batteries, including black mass recycling and other manufacturing wastes • supporting the recovery of residual metals and minerals from tailings and other mine wastes • exploring how to support deep mining to facilitate exploration and production at depth • prioritizing research projects related to critical minerals and electric vehicle batteries to qualify for the Ministry of Colleges and Universities' (MCU) Ontario Research Fund: Research Excellence • exploring how to support R&D and access to and/or development of intellectual property related to critical minerals processing for high value applications including electric vehicle batteries • exploring new options for incentivizing critical minerals research and development and connecting the critical minerals sector with intellectual property-related support services

Pillar	Area of focus	Ontario's commitments
Investing in innovation, research and development (continued)		<ul style="list-style-type: none"> highlighting the programs at the Northern Ontario Heritage Fund Corporation that can be leveraged by companies looking to research and prove out innovative new mining and processing techniques
Investing in innovation, research and development	Fostering collaboration	<ul style="list-style-type: none"> collaborating with start-ups and large technology companies working to develop recycling methods for critical minerals and precious metals creating opportunities for researchers, industry representatives and government to network and create collaborative research opportunities building mineral testing capacity and small-scale processing to support early-stage critical minerals projects, through collaboration with post-secondary institutions and critical minerals producers
Building economic development opportunities with Indigenous Partners	Sharing benefits from resource development	<ul style="list-style-type: none"> expanding RRS agreements to other Indigenous organizations, including further sharing of Crown revenues from forestry stumpage, mining tax and royalties and aggregate royalties
Building economic development opportunities with Indigenous Partners	Enhancing capacity and supporting Indigenous businesses	<ul style="list-style-type: none"> ensuring Ontario's current funding programs include supporting critical minerals education and capacity building within Indigenous communities promoting programs that support Indigenous-owned business, workforce, and skill development developing educational tools in collaboration with Indigenous partners to foster a better understanding of critical minerals opportunities and benefits strengthening relationship processes with Indigenous partners to ensure a continued critical minerals dialogue

Appendix B: Summary of strategy commitments

Pillar	Area of focus	Ontario's commitments
Building economic development opportunities with Indigenous Partners (continued)		<ul style="list-style-type: none"> finding ways for Indigenous communities to prosper from resource development and supply chain opportunities
Growing the labour supply and developing a skilled labour force	Growing the labour force	<ul style="list-style-type: none"> supporting local employment development and human resource planning through financial assistance available to local communities, sector groups, employee/employer associations and employers partnering with the Chiefs of Ontario to establish a First Nations Economic Growth and Prosperity Table to support economic advancement and well-being for First Nation communities working with the Government of Canada to maintain pathways for foreign workers and international students to apply for permanent residence including through the Ontario Immigrant Nominee Program (OINP) helping highly skilled, internationally trained immigrants obtain employment in which they were trained through the Ontario Bridge Training Program
Growing the labour supply and developing a skilled labour force	Enhancing training pathways	<ul style="list-style-type: none"> supporting industry efforts to attract and train underrepresented workers promoting careers in the mining sector to encourage enrollment in mining curriculum, skilled trades and training programs working with post-secondary institutions, including Indigenous institutes and the private sector, to leverage labour force training and skills development programs and support culturally appropriate, experiential and cooperative training opportunities for students

Pillar	Area of focus	Ontario's commitments
<p>Growing the labour supply and developing a skilled labour force (continued)</p>		<ul style="list-style-type: none"> • addressing skilled trade shortages by clearly identifying the in-demand trades and working with the Ministry of Labour, Training and Skills Development to target funded apprenticeship programs to build the pipeline of skilled trades workers • supporting employment and training partnerships working with the Ministry of Labour, Training and Skills Development to identify employment and training programs to develop job-ready, skilled workers that meet the workforce needs of employers • funding several initiatives to support the development of micro-credentials