invest IN CANADA

SPOTLIGHT ON MINING

Opportunities in Canada's Minerals and Metals Sector

CANADA:

THE WORLD'S MINING INVESTMENT DESTINATION OF CHOICE

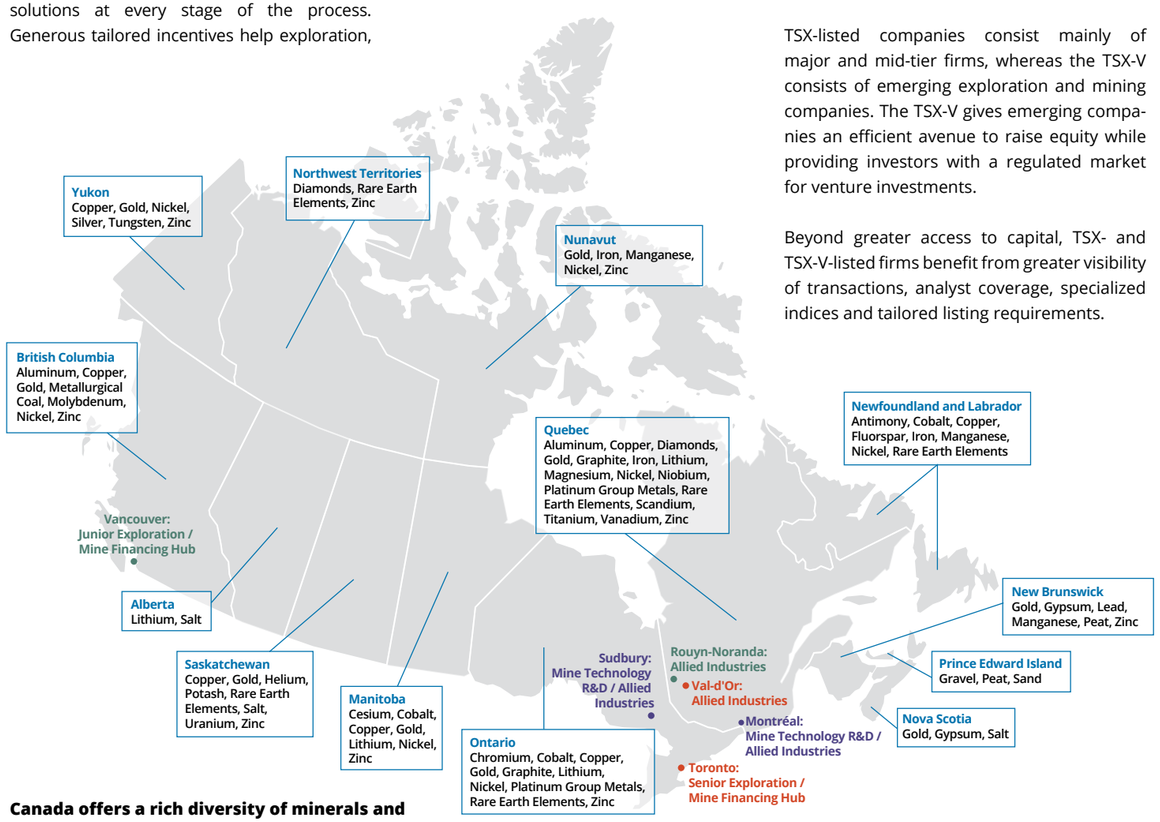
Canada's global leadership in mining starts with a rich ecosystem in the minerals and metals sector.

Abundant mineral endowment attracts dynamic junior exploration, mid-tier and large multinational firms. They are able to find stability and success in Canada through regulatory processes that support responsible and sustainable resource development, longstanding democratic institutions, the rule of law and a commitment to transparency.

There are additional reasons why Canada is the top destination for investment in mining value chains. Canada's forward-thinking mining supply and services (MSS) industry provides solutions at every stage of the process. Generous tailored incentives help exploration, mining and processing companies succeed. A commitment to producing minerals the right way – protecting the environment while ensuring local and Indigenous communities benefit – reflects an unparalleled adherence to environmental, social and governance (ESG) factors.

WORLD LEADER IN MINERAL RESOURCES

Canada is already an important and reliable supplier to the mineral-hungry markets of North America, Asia and Europe. As demand for responsibly and sustainably produced materials soars and as countries seek to diversify their supply chains, Canada offers a vast variety of investment opportunities.



Canada offers a rich diversity of minerals and metals in all 10 provinces and three territories.

CANADIAN PRODUCTION INCLUDES OVER 60 MINERALS AND METALS FROM OVER 200 MINES, AS WELL AS 50 NON-FERROUS SMELTERS, REFINERIES AND STEEL MILLS.

STRONG CAPITAL MARKETS

Canada is a leading destination for international mining finance. The Toronto Stock Exchange (TSX) and TSX Venture Exchange (TSX-V) are home to 40% of the world's public mining companies – more than any other market in the world.

TSX-listed companies consist mainly of major and mid-tier firms, whereas the TSX-V consists of emerging exploration and mining companies. The TSX-V gives emerging companies an efficient avenue to raise equity while providing investors with a regulated market for venture investments.

Beyond greater access to capital, TSX- and TSX-V-listed firms benefit from greater visibility of transactions, analyst coverage, specialized indices and tailored listing requirements.

In 2022, the TSX and TSX-V were home to **1,155 mining issuers** with a combined market capitalization of over **$577 billion** and raised **$7.5 billion** in equity capital.

VIBRANT JUNIOR EXPLORATION SECTOR

Canada is a global hub for junior exploration companies – the small, flexible firms that specialize in higher-risk, early-stage exploration activities. Juniors act as project generators for investors and larger producing companies, helping fill the pipeline of future mineral production. In 2022, juniors, which account for 76% of active projects and 83% of project operators in Canada, spent $2.3 billion on exploration.

SUPPORTIVE GOVERNMENTS

Investors enjoy a variety of incentives and support from Canada's federal, provincial and territorial governments. These include favourable tax policies and fiscal measures to encourage exploration, development, mining, processing and advanced materials manufacturing.

CANADA IS ONE OF THE MOST MINING-FRIENDLY JURISDICTIONS IN THE WORLD.

Canada has a solid reputation for mining research and development, including pioneering R&D for technologies that make mining and processing more responsible, more sustainable and more efficient. As well, strategic public investments in R&D for critical minerals and net-zero technologies are helping Canada position itself as an integral part of regional and global value chains for batteries and electric vehicles.

MARKET ACCESS MADE EASY

Canada offers easy and extensive access to global markets. Coastal ports provide direct maritime access to Europe, South America and Asia; the Great Lakes provide straightforward access to the U.S. As well, rail, trucking and air transport keep Canada seamlessly connected to the North American market and supply chain hubs for key sectors – including critical minerals and automotive.

Canada has foreign investment protection agreements (FIPAs) with 35 countries and 15 free trade agreements (FTAs). These agreements, including the Canada-United States-Mexico Agreement (CUSMA), the Canada-European Union Comprehensive Economic and Trade Agreement (CETA), and the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), give foreign investors preferred access to 51 countries representing 1.5 billion consumers.

Businesses in Canada enjoy preferential access to a global market with a combined GDP of US$54 trillion, which represents 61% of global GDP.

ACCESSIBLE PUBLIC GEOSCIENCE TO REDUCE RISK

Public geoscience helps investors reduce the risk and cost of future exploration, offering opportunities to focus on areas of highest mineral potential. Canada's modern, high-quality geoscience is both extensive and widely used. National and provincial/territorial geological survey organizations have robust programs that provide regional geological context and assist in the selection of exploration targets and projects.

CANADA'S STATE-OF-THE-ART PUBLIC GEOSCIENCE IS A PROVEN TOOL TO IDENTIFY PROSPECTIVE AREAS AND GUIDE PRIVATE SECTOR INVESTMENTS IN MINERAL EXPLORATION.

CLEAN, RENEWABLE ELECTRICITY

Thanks to a diverse mix of low- or non-emitting sources, 83% of electricity generated in Canada produces no greenhouse gas (GHG) emissions. Hydro and other renewables contribute 68% of Canada's electricity. Wind and solar photovoltaic (PV) energy are the fastest-growing sources of generation in Canada.

Low-carbon electricity from the grid is complemented by customizable and flexible on-grid, off-grid and hybrid clean energy generation and storage solutions. Innovative technologies help mines in remote and harsh climates reduce their carbon emissions by providing reliable alternatives to diesel fuel.

INVESTMENT OPPORTUNITIES

IN THE CANADIAN MINERALS AND METALS SECTOR

Canada has the minerals and metals, as well as the mining know-how and technology, to deliver key inputs into the world's most important supply chains. These vital supply chains include everything from health care, agriculture, automotive and aerospace to telecommunications and consumer electronics.

Countries around the world are moving towards a low-carbon and digital economy. Underpinned by the adoption of renewable energy technologies, electrification and zero-emission vehicles, forward-looking companies need to look no further than Canada to secure their supply chains.

YOUR PATH TO INVESTING IN THE CANADIAN MINERALS AND METALS SECTOR

There are several pathways for investors to enter the various stages of mineral development – exploration, development, production, processing and recycling – in Canada:

- equity ownership
- joint venture
- merger and acquisition
- offtake agreement
- initiating a new project independently

These pathways offer their own advantages for potential growth and success, with varying levels of risks and returns.

Equity ownership, joint ventures, and mergers and acquisitions allow the investor to benefit from value creation in the sector. For example, value can be achieved from exploration successes, receipt of approvals and permits, project cost refinements and improved market outlooks.

Offtake agreements guarantee access to key mineral supplies. Initiating a new project independently comes with higher risk and longer timelines but can also lead to full ownership of a producing mine.

COMMON PATHWAYS INTO THE CANADIAN MINERALS AND METALS SECTOR

INVESTMENT VEHICLES	ADVANTAGES
Equity Participation Joint Venture Merger or Acquisition	• Knowledge of local laws and regulations • Existing economic and technical studies • Permitted or advanced in permitting and regulatory processes • Established community relations • Network of equipment and service suppliers already in place
Offtake Agreement	• Secure mineral supply
Starting a New Project	• Full ownership • Full ownership of future additions to mineral resources and reserves • Control of the project, related intellectual property and future strategy

CANADA'S FIRST CRITICAL MINERALS STRATEGY

As part of its first Critical Minerals Strategy, launched in December 2022, Canada is investing nearly $4 billion to increase the supply of responsibly sourced critical minerals and support the development of value chains both in Canada and internationally to achieve a green and digital economy.

Key areas of focus under the strategy include stimulating research, innovation and exploration; accelerating project development; and enhancing global security and partnerships with allies.

CRITICAL MINERALS

Canada has the potential to be a **North American hub** for **battery-grade nickel** and **cobalt refining**.

IN CANADA PRESENT UNMATCHED OPPORTUNITIES

The availability and reliable production of minerals and metals used in electric vehicles, renewable energy, clean technology applications and advanced manufacturing supply chains are of vital global concern. As a producer of many of these critical minerals and metals, Canada is a natural choice for investors.

CANADA IS THE THIRD LARGEST PRODUCER OF PALLADIUM AND FOURTH LARGEST PRODUCER OF PLATINUM GLOBALLY.

PLATINUM GROUP METALS (PGMs)

Platinum group metals (PGMs) comprise six important metals: platinum, palladium, rhodium, iridium, ruthenium and osmium.

Palladium and rhodium are used in auto catalysts, which reduce tailpipe emissions. Iridium and ruthenium use in hydrogen production and fuel cells is expected to grow.

RARE EARTH ELEMENTS (REEs)

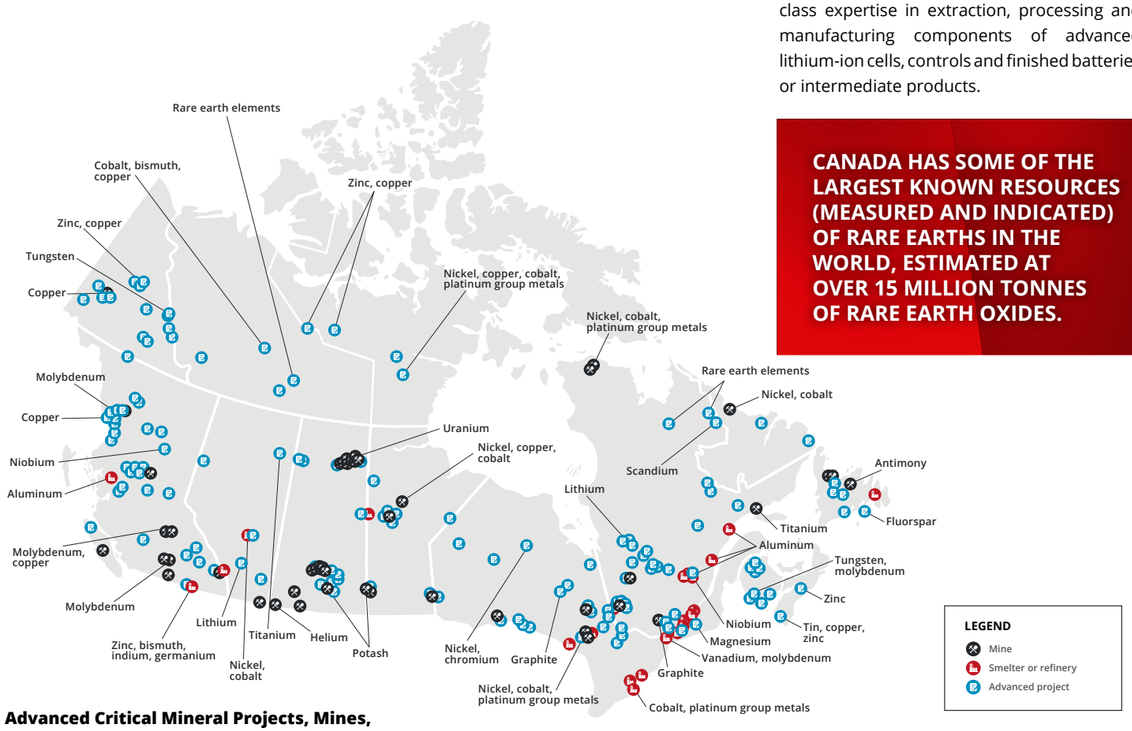
Rare earth elements (REEs) are essential components in clean energy technologies and other applications.

Gearless wind turbines, used in offshore and remote onshore locations with high wind energy and hybrid and electric vehicles, require neodymium-iron-boride permanent magnets to reduce weight and increase efficiency. Corrosion resistance, mechanical properties, performance and cost are optimized with praseodymium, terbium and dysprosium additions. Scandium-aluminum alloy products are used in the automotive, aerospace and defence sectors, as well as in fuel cells.

BATTERY MINERALS AND METALS

In addition to high-quality battery minerals and metals deposits, Canada offers world-class expertise in extraction, processing and manufacturing components of advanced lithium-ion cells, controls and finished batteries or intermediate products.

CANADA HAS SOME OF THE LARGEST KNOWN RESOURCES (MEASURED AND INDICATED) OF RARE EARTHS IN THE WORLD, ESTIMATED AT OVER 15 MILLION TONNES OF RARE EARTH OXIDES.



Advanced Critical Mineral Projects, Mines, Smelters and Refineries in Canada
Source: Natural Resources Canada, 2021

As lithium-ion battery manufacturing becomes regionalized, Canada is a natural choice for investors looking to integrate themselves within the North American battery supply chain.

Canada's minerals and metals sector understands that producing key minerals and metals the right way – through a commitment to ESG practices – is important to regulators, brand owners and consumers.

NICKEL AND COBALT

Global shortages of Class 1 nickel and refined cobalt projected before the end of the decade spell opportunities for investors.

Canada already ranks sixth globally in nickel production and seventh in cobalt production. Thanks to advantages such as access to clean energy sources and investments in research, development and adoption of green technologies, Canadian nickel is also among the world's least emissions intensive.

There is a robust pipeline of advanced nickel-copper-cobalt-PGM projects across Canada.

LITHIUM

Canada has some of the highest-purity hard rock deposits that are expected to produce battery-quality lithium hydroxide. Canada has an estimated 3.2 million tonnes of lithium resources (measured and indicated) at hard rock deposits. In addition to a currently-producing project in Québec, several companies are currently working to develop hard rock projects in Ontario, Québec, and Manitoba. These projects range from early exploration to a pre-production stage.

Subsurface brine from energy sector operations in Alberta and Saskatchewan also present potential for lithium. Canadian companies are actively developing and testing direct extraction technologies to produce high-grade, high-purity lithium concentrate in a sustainable and responsible way. Pre-existing oil and gas activity allows projects to take advantage of existing and abundant geological data, infrastructure to access brine reservoirs, along with a highly trained workforce.

GRAPHITE

Lithium-ion batteries require consistently high-purity natural graphite – 99.98% or better. Developing a cost-effective way to deliver graphite of this quality is a challenge for battery makers.

Canada currently accounts for only about 1% of global natural graphite production but is an important source of natural flake graphite for North America. This form of graphite is suitable to higher value markets such as battery anode materials.

Canada hosts several attractive deposits with proximity to U.S. markets and a number of projects at various stages of development, including several graphite projects based on large deposits of crystalline graphite.

CANADA'S CRITICAL MINERALS LIST CONTAINS 31 MINERALS AND METALS CONSIDERED ESSENTIAL FOR THE ECONOMIC SECURITY OF OUR COUNTRY AND OF OUR TRADING PARTNERS. AS KEY INPUTS FOR A CLEAN AND DIGITIZED ECONOMY, COPPER AND ZINC ARE INCLUDED IN CANADA'S CRITICAL MINERALS LIST.

INNOVATION HAPPENS HERE

The Saskatchewan Research Council is developing a Rare Earth Processing Facility, including a commercial processing plant. The facility, the first-of-its-kind in Canada, will form an industry model for future commercial REE initiatives and supply chain development in Saskatchewan and the country.

CARBON NEUTRAL MINING FOR A CARBON NEUTRAL FUTURE

Electrification is helping Canada's mining industry emerge rapidly as a net-zero leader among mining nations. Taking advantage of clean, low-cost electricity, a growing number of forward-thinking Canadian projects are adopting electric mining equipment and battery electric vehicles (BEVs). The benefits extend beyond lower carbon emissions and include improved safety and higher performance.

THE ONLY BATTERY-GRADE COBALT REFINERY IN NORTH AMERICA

A hydrometallurgical cobalt refinery owned by Electra Battery Materials Corporation is on track to produce battery-grade cobalt for the North American market and become the second largest such refinery outside China. The hydroelectricity-powered refinery is in proximity to major auto manufacturing hubs and accessible to the U.S. by road and rail.

WELL-ESTABLISHED OPPORTUNITIES

IN CANADA'S BASE METALS AND IRON ORE

COPPER

Thanks to its excellent electrical and thermal conductivity and extreme versatility, copper is widely used in manufacturing, construction, electric wires and cables. Copper will be a key enabling metal for clean energy technologies, battery storage and electric vehicles.

In Canada, copper occurs in polymetallic porphyry and other base metal deposits which may contain gold, nickel, zinc, molybdenum, silver or PGMs. There is significant potential for new deposits of copper throughout Canada, with many projects already completing advanced technical studies.

Twenty-three operating mines produce copper as a primary commodity or as a co- or by-product. Fifty-seven percent of Canadian copper mining occurs at underground operations; open pit mines account for 26% of operations; 17% of mines use both open pit and underground methods. Canada also maintains a strong copper recycling industry.

ZINC

Zinc is a durable, versatile and ubiquitous metal – present in everything from medicine to infrastructure to transportation and renewable energy and electronics. Zinc protects steel from corrosion in infrastructure, buildings and automobiles, and is used in brass, other alloys, automotive and truck tires and chemical applications.

Zinc occurs in Canada in polymetallic deposits which may contain lead, silver, copper and minor metals. Canada has five underground mines at which zinc is a significant by-product. Mines in Yukon have access to port and rail facilities that provide access to export markets. Mines in Central or Eastern Canada may ship to a domestic smelter or export concentrate.

IRON ORE

The primary use of iron ore is to make steel – the most critical engineering and construction material. Some iron is used in other applications that include magnets, auto parts and catalysts. Canada ranks among the top 10 global producers of iron ore.

Most of Canada's iron ore production includes direct-shipping ore, concentrate and pellets. Products sell at a premium due to high iron content and low impurity levels, which reduce manufacturing costs and ensure high quality steel. High volume shippers consume hydroelectricity from the grid and some iron ore pelletizing plants have access to natural gas. As a result, most iron products have a low carbon footprint.

In addition to the Labrador Trough, an area near the border between Québec and Newfoundland and Labrador, direct-shipping ore is also produced in Nunavut. Although production in Nunavut is off grid, the high quality of the ores means little processing is required. Proximity to a port is an additional benefit, providing access to European and East Asian markets via the northern sea route.

CANADA CONSISTENTLY RANKS IN THE TOP FIVE IN THE GLOBAL PRODUCTION OF REFINED ZINC METAL (INCLUDING RECYCLED ZINC) AND HAS SIGNIFICANT POTENTIAL FOR NEW DEPOSITS.

NON-METALLIC MINERALS AND GOLD

POTASH

Canada is the world's largest producer and exporter of potash, which has vital agriculture and agri-food applications and boosts crop yields. Most significant potash resources are located in Saskatchewan. The province is home to 10 mines and has seen the advancement of several development projects over the past decade.

Canadian mines are well-positioned to serve key agricultural regions in the United States. Producers also access other export markets, using terminals on the Pacific and Atlantic oceans, as well as the Great Lakes.

DIAMONDS

In Canada, diamonds occur in kimberlite pipes in northern regions. They are mined in accordance with the principles of sustainable development and adhere to high environmental standards that generate important social and economic benefits for northern regions, communities and businesses.

Canada currently has five producing diamond mines and $888 million has been spent on diamond exploration in Canada over the past decade.

International shipments of rough diamonds must be accompanied by a Kimberley Process Certificate guaranteeing that diamonds are conflict-free. In addition, a process validates that a diamond was mined in Canada.

GOLD

Canadian gold deposits often contain silver, copper or other valuable minerals. Significant amounts of gold are also found in polymetallic deposits, often with copper, lead, nickel or zinc.

Canada has 43 operating precious metal mines in nine provinces and territories. Fifty-four percent of Canada's gold mines are underground operations, with 26% operating as open pits, while the remainder employ both methods. Most are stand-alone gold mines, the majority of which are in areas with a long history of mining, highly skilled local workforce and well-established infrastructure and processing facilities.

Numerous projects have completed advanced technical studies, so there is significant potential for new gold operations.

SUSTAINABLE POWER SOLUTIONS FOR REMOTE MINING LOCATIONS

Mines across the world are being challenged by volatile energy costs and increasingly remote operations, all while facing pressure from investors and clients to reduce carbon emissions.

Innovative Canadian energy storage and microgrid companies are working with mining partners to develop remote power solutions for mines and deliver cutting-edge, customizable, scalable solutions.

For example, Glencore's Raglan nickel mine and facilities in Northern Québec successfully replaced 4.4 million litres of diesel fuel, representing around 12,000 tonnes of GHGs, with renewable energy, thanks to wind turbines and storage solutions provided by the Canadian firms TUGLIQ Énergie, Electrovaya, Hatch and Hydrogenics.

CANADA IS AN IMPORTANT GLOBAL PRODUCER OF CONFLICT-FREE DIAMONDS.

OPPORTUNITIES

IN CANADIAN MINERAL PROCESSING

Canada has processing plants and refineries for many minerals and metals, including cobalt, caesium, indium, niobium, germanium, PGMs, copper, nickel and uranium. These facilities benefit from clean renewable hydroelectricity in Canada, as well as an expansive transportation infrastructure to move goods downstream to North American manufacturing centres.

An array of investment opportunities in new and existing facilities currently exists.

Canada's processing and refining expertise includes:

LOW-CARBON STEEL FOR A SUSTAINABLE FUTURE

Canada is propelling the phase-out of coal-fired steelmaking. Federal investments in Algoma Steel and ArcelorMittal Dofasco support the steelmakers' move to state-of-the-art electric-arc furnace technology. The transition to a cleaner, greener, electricity-based process will cut Canada's GHG emissions by up to six million tonnes per year by 2030 – equivalent to taking more than 1.8 million passenger vehicles off the road.

EMISSIONS-FREE ALUMINUM

Rio Tinto, Alcoa and Apple are partners in ELYSIS – a joint venture developing and commercializing anode technology. This groundbreaking innovation will eliminate direct GHG emissions from the aluminum smelting process, with oxygen being the only release from the anode.

STEEL

Canada is a producer of steel alloys and products with a carbon footprint significantly lower than many competitors due to the low carbon intensity of electricity.

Facilities include three integrated steel mills that produce structural steel and other steel products, two large electric-arc furnace mills that process scrap and metallized iron ore pellets reduced with natural gas, as well as seven electric-arc furnace operations that melt scrap and adjust alloy composition to produce steel products. Other mills produce wear materials and large-diameter pipe for high pressure pipelines.

ALUMINUM

Canada imports bauxite and smelter-grade alumina for production of aluminum and alloys. An alumina refinery in Québec converts bauxite to alumina, and seven aluminum smelters produce aluminum and alloys. The alumina refinery operator is assessing potential for gallium recovery.

All smelters consume hydroelectricity and use technology that is at or near best-in-class, so Canadian aluminum has a carbon footprint that is lower than most competitors.

BASE METALS

Primary smelters and refineries are located coast to coast in Canada, including integrated lead-zinc operations; nickel, cobalt and zinc refineries; two nickel smelters and a copper smelter, a copper refinery; and a hydrometallurgical facility that produces refined nickel, copper and cobalt.

These operations are key sources of sulphur products and minor metals, including antimony, bismuth, cadmium, cobalt, germanium, gold, indium, PGMs, selenium, silver and tellurium. Copper and lead refineries also refine silver and gold.

Secondary smelters include four secondary lead smelters, of which three recycle lead acid batteries and one recycles lead anodes for reuse by an associated primary zinc refinery, and a secondary zinc smelter.

FERROALLOYS

Ferroalloy producers include a producer of vanadium and molybdenum products in Ontario, and an integrated mine, a ferroniobium smelter and two producers of silicon and/or ferrosilicon in Québec.

PRECIOUS METALS

The Royal Canadian Mint and a custom refinery each refine gold and silver in Ontario.

CANADIAN MINERAL TECHNOLOGIES

Canada's extensive mining supply and services (MSS) industry has been at the forefront of implementing disruptive technologies – from data analytics and automation to BEVs.

Canada is a prime testing ground for disruptive technologies and offers export growth potential due to the size and global reach of its mining sector. Canada's rich innovation ecosystem spans research, development, demonstration, commercialization and introduction to market.

Specific areas where international investors can accelerate local innovations and partner with Canadian innovators include:

BRING YOUR INNOVATION TO MARKET

In 2021, Canada's Centre for Excellence in Mining Innovation (CEMI) launched a $112.4 million project that bridges the innovation-to-commercialization gap.

Through the Mining Innovation Commercialization Accelerator (MICA) Network, companies in Canada's MSS industry can connect with innovators and exporters from across the country and accelerate the development and commercialization of their technologies.

RENEWABLE POWER AND MINE ELECTRIFICATION

Using renewable sources for power generation at mining or processing sites will not only address emissions, but also the costs associated with fuel transportation and storage – a key concern for operations in remote areas or harsh climates.

International companies investing in Canada can leverage domestic expertise in renewable energy project development, energy storage, microgrids, electrification of transportation fleets and equipment, and mining automation and big data solutions.

ALTERNATIVE POWERED VEHICLES

There is great momentum to replace fossil fuels as the main source of power for surface and underground vehicles – whether with electric batteries, hydrogen fuel cells, photovoltaic cells or hybrid systems.

International companies can take advantage of Canada's strong engineering expertise and underground testing facilities to design and test alternative powered equipment.

ORE SORTING

Mine operators recognize that sorting – either particle-based or bulk – will be a critical technology for the mines of tomorrow, especially in the face of depleting reserves and ore grades.

Canadian mining clusters are incubators for new ore sorting technologies with the potential to address declining ore grades while enhancing sustainability outcomes.

WASTE AND WASTEWATER MANAGEMENT, AND MINING FROM WASTE

In addition to technologies and processes related to the treatment of tailings, sludge and process water, there is increasing interest in extracting minerals and metals from waste.

International firms investing in Canada can benefit from extensive experience in water management and treatment, chemical-free processing expertise and emerging capabilities in mining value from waste.

DIGITALIZATION AND AUTOMATION

The minerals and metals sector is deploying automation, information systems and supporting communications infrastructure to increase productivity while safeguarding its workforce – a key concern for underground and ultra-deep mines as well as mineral activities in remote locations.

Canada's MSS industry offers cutting-edge automation and digitalization expertise to support safer, more sustainable and seamlessly connected mines and processing operations.

SAFETY

Canada's MSS industry is renowned for its robust and highly developed mine site safety regime. Canadian MSS companies help strengthen safety performance in Canada and internationally by improving safety monitoring and developing novel safety solutions, including ventilation on demand, tailored lock-out and fatigue monitoring capabilities.

THE CANADIAN EDGE:

ATTRACTIVE MINING TAX PROVISIONS AND INCENTIVES

Canada's tax policies for mining are among the most competitive in the world. They address the realities of provincial ownership and royalties, high risk capital and capital intensity, as well as a conscious decision by governments to encourage this industrial activity.

Essentially, all Canadian mining tax policies are profit-based. Federal, provincial and territorial tax tools are designed to support investors and encourage investment in Canadian projects. Some of these provisions and incentives include:

- **Deduction of Provincial/Territorial Mining Taxes and Royalties:** Taxes and royalties that are paid to a province or territory with respect to income from a mineral resource are fully deductible when computing income for federal, provincial and territorial corporate income tax purposes.

- **Flow-Through Shares (FTSs):** FTSs allow a mining (or oil and gas) company to "flow through" certain expenses, like mineral exploration or development, to the share purchaser. These expenses are then deemed to have been incurred by the investor, not the corporation, which can reduce the investor's taxable income.

- **Mineral Exploration Tax Credit (METC):** This incentive provides a 15% credit (reduction of the taxes payable for the investor) designed to help exploration companies raise equity funds in addition to the regular tax deduction associated with FTS investments. The incentive is extended until March 31, 2024.

- **Critical Mineral Exploration Tax Credit (CMETC):** A 30% tax credit for certain exploration expenditures targeted at nickel, lithium, cobalt, graphite, copper, rare earth elements, vanadium, tellurium, gallium, scandium, titanium, magnesium, zinc, platinum group metals or uranium. Credits can be claimed by flow-through share investors before April 1, 2027.

- **Accelerated Capital Cost Allowance:** This incentive allows businesses to write off 100% of the cost of machinery and equipment used for the manufacturing and processing of goods, and specified clean energy generation/conservation equipment.

- **Canadian Exploration Expense (CEE):** This incentive relates to expenses incurred for the purpose of determining the existence, location, extent, or quality of a mineral resource in Canada. CEEs are 100% deductible in the year in which they occur. Companies can carry unused balances forward indefinitely or transfer them to FTS investors.

- **Canadian Development Expense (CDE):** This deduction applies to expenses such as sinking or excavating a mine shaft, pre-production mine development expenses after 2017, and the cost of any Canadian mineral property. The CDE is deductible at a 30% declining balance. Unclaimed balances may be carried forward indefinitely or can be transferred to FTS investors, except for the cost of any Canadian mineral property.

- **Investment Tax Credit for Clean Technologies:** A 30% refundable tax credit towards the capital cost of eligible clean technology equipment. The credit will be available in 2023 and phased out from 2032 to 2034.

- **Canada Growth Fund:** The fund will use investment tools such as concessional loans and contracts for difference to reduce price and other risks to build Canada's clean economy, including Canada's upstream critical minerals development. The fund's aim is to attract billions of dollars in new private capital to seize on opportunities provided by the net-zero economy.

- **Clean Technology Manufacturing Investment Tax Credit (CTM-ITC):** A new 30% refundable tax credit for clean technology manufacturing and processing, and critical mineral extraction and processing. The credit generally includes machinery and equipment, including certain industrial vehicles, used in manufacturing, processing, or critical mineral extraction, as well as related control systems. In addition, eligible activities include the extraction and certain processing activities related to lithium, cobalt, nickel, graphite, copper, and rare earth elements. Available starting January 1, 2024 and will be gradually phased out in 2032 to 2034.

- **Generous Loss Carry-Forward and Carry-Back Provisions:** The Canadian tax regimes for mining recognize the cyclical nature of the commodity market. Net capital losses may be carried back three years or forward indefinitely. Non-capital losses may be carried back three years and forward 20 years.

- **Provincial and Territorial Tax and Non-Tax Incentives:** To increase the attractiveness of exploration investment, some Canadian provinces offer investors additional tax incentives tied to FTSs. In addition, many provinces and territories also provide non-tax incentives such as cash grants, financial assistance, grubstake programs, free training and venture capital support to prospectors.

ROBUST INCENTIVES TO ACCELERATE INNOVATION

Canada has been an early adopter of mining automation, including its application in exploration drilling, haulage, ore processing and ventilation, such as at the Borden Mine in Ontario and the Highland Valley Copper Mine in British Columbia.

Canada's state-of-the-art IT infrastructure and expertise in telecommunications, large-scale integration of industrial activities, and advanced analytics have led to the establishment of remote operating centres in the industry, including a Newmont centre in Ontario and an ArcelorMittal centre in Québec.

The minerals and metals sector's shift to a net-zero carbon economy will continue to require innovation and adoption of disruptive technologies. The Government of Canada offers a number of programs that accelerate the pace of innovation in all aspects of exploration, mining, processing and advanced materials manufacturing. Federal government programs are complemented by generous provincial and territorial tax credits, grants and training programs that encourage R&D.

These programs include some of the most generous, multi-billion dollar incentives like the Scientific Research and Experimental Development (SR&ED) tax credit. The Industrial Research Assistance Program (IRAP) helps small and medium companies build their innovation capacity and bring their solutions to market.

The Strategic Innovation Fund (SIF) is a federal investment fund which supports a wide range of large-scale, transformative and collaborative projects across all sectors of the economy.

To support the implementation of the Canadian Critical Minerals Strategy, Budget 2022 proposed $1.5 billion in targeted funds for the development of critical minerals projects through SIF. These funds aim to prioritize innovative critical minerals projects with processing, manufacturing and recycling applications. Support for mining projects could be considered should they demonstrate exceptional innovation benefits and strong vertical integration in order to advance domestic value chains.

The Clean Growth Hub provides customized services to help companies at all stages of clean tech innovation and adoption to take advantage of the best-suited funding opportunities. Sustainable Development Technology Canada is an arms-length organization that invests in Canadian clean technologies that have the potential to provide significant environmental and economic benefits.

Companies can also leverage joint funding and research collaboration opportunities with the National Research Council and CanmetMINING.

SUPPORTING INFRASTRUCTURE PROJECTS FOR SUSTAINABLE CRITICAL MINERALS DEVELOPMENT

In November 2023, Canada launched the Critical Minerals Infrastructure Fund (CMIF), a key component under the Critical Minerals Strategy. The CMIF will address key infrastructure gaps to enable sustainable critical minerals production and to connect resources to markets.

With up to $1.5 billion available over seven years, the fund will support clean energy and electrification initiatives as well as transportation and infrastructure projects that will enable the sustainable development of Canada's critical minerals.

A UNIQUELY CANADIAN TAX INNOVATION: FLOW-THROUGH SHARES

Companies involved in mineral exploration and development, like junior mining companies, have little or no net income to make use of tax deductions. At the same time, these companies need to raise financing to continue their activities and remain competitive.

Flow-through shares (FTSs) allow companies to raise capital while transferring certain exploration expenditures incurred on Canadian soil to their investors. For individual investors, the advantages can be twofold:

- **They receive a 100% tax deduction for the amount they invested in the shares, plus a 15% tax credit in the case of an eligible expense, or a 30% tax credit in the case of eligible expense for certain critical minerals.**

- **They may see their investment appreciate if the exploration is successful.**

CANADA'S PEOPLE ADVANTAGE:

A WEALTH OF TALENT

To succeed in today's ever-changing world, mining and technology companies need a steady supply of skilled talent. Canada's educated and diverse population is the foundation of economic growth and the key to meeting the minerals and metals sector's challenges.

SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS (STEM)

More than 80,000 students graduate from Canadian universities each year in pure and applied sciences, engineering and mathematics. More than 33,000 of these graduates are engineers. A positive post-secondary enrollment trend in STEM fields like environmental science, engineering, artificial intelligence and robotics will ensure Canada's place as a top destination for knowledge-based industries like mining.

SECTOR EXPERTISE

Canada is a source of minerals and materials experts for some of the world's largest mining companies. There are more than 40 mineral laboratories in Canadian private commercial and public institutions that house expert geologists, mining engineers, metallurgists and technicians with considerable experience in materials geology, processing technologies, analytics and applications. Canadian universities and colleges train the next generation of mining, metallurgical and materials engineers.

INDIGENOUS PARTICIPATION

Indigenous workers represent 12% of the upstream mining labour force. Federal, provincial and territorial government apprenticeship and training programs are further supporting Indigenous participation in the sector, including jointly through a number of pan-Canadian initiatives under the Canadian Minerals and Metals Plan that aim to attract and retain diverse talent in the minerals and metals sector.

ACCESS TO INTERNATIONAL TALENT

Immigrants are a significant portion of highly skilled labour, filling half of all STEM-related jobs in the country. Canada's Global Skills Strategy (GSS) is a key program that allows businesses to bring top international talent to work for their company quickly by providing a faster immigration process. GSS provides a client-focused service that understands the needs of new companies in their drive to compete globally.

The **minerals and metals sector** is the **second largest private sector employer** of **Indigenous Peoples** in Canada.

PARTNERSHIPS WITH INDIGENOUS PEOPLES AND COMMUNITIES

In Canada, mining projects are often situated close to Indigenous, northern, remote and isolated communities. In fact, most producing mines and exploration projects in Canada are located within 100 kilometres of an Indigenous community. Indigenous communities can be valuable partners for minerals and metals sector investors.

Indigenous participation and the inclusion of Indigenous knowledge reduce investor risks by contributing to project design and providing certainty around land use and access. At the same time, projects can drive community development by bringing socio-economic benefits such as employment, training, procurement, business and infrastructure. Exploration and mining agreements can also be a key path to economic growth, creating new investment opportunities for the benefit of communities today as well as future generations.

EARLY AND ONGOING ENGAGEMENT

Many mineral deposits in Canada are found on lands covered by a treaty or a claim asserted by an Indigenous community. Consequently, early and sustained engagement is critical to respecting Aboriginal and treaty rights, in order to acquire and maintain community acceptance over the long term. Building trust, fostering inclusion and maximizing socio-economic benefits in partnership with Indigenous communities support the success of mining projects in Canada.

EXPLORATION AND MINING AGREEMENTS

Agreements between mining companies and Indigenous communities play an important role in shaping the terms under which minerals and metals are extracted near Indigenous communities. These agreements are known by various names (impact and benefit agreements, exploration agreements, participation agreements, cooperation agreements, memoranda of understanding and socio-economic agreements).

Agreements help to maximize socio-economic benefits for Indigenous communities while providing proponents with a framework and tools for relationship-building, project certainty and clarity on expectations for both communities and project proponents. There were over 520 agreements signed between companies and Indigenous communities or governments since 2000.

IN JANUARY 2021, DET'ON CHO NAHANNI CONSTRUCTION CORPORATION, THE ECONOMIC ARM OF THE YELLOWKNIVES DENE FIRST NATION, BECAME THE FIRST INDIGENOUS-GOVERNMENT-OWNED BUSINESS IN THE NORTHWEST TERRITORIES TO LEAD OPERATIONS AT A MINE SITE.

PARTNERSHIPS WITH INDIGENOUS ORGANIZATIONS AND COMMUNITIES

Jurisdictions around the world look to Canada's minerals and metals industry for examples on how to form mutually beneficial partnerships with Indigenous Peoples and secure long-lasting relationships with local communities. Through ongoing engagement with Indigenous organizations and community leaders, Canada is continuing to develop initiatives that will increase Indigenous business procurement in mining and expand economic and social benefits for local communities through own-source revenue, access to supply chains and better community supports.

Furthermore, work is being done to enhance Indigenous communities' capacity to participate in the mineral development cycle – from pre-exploration to reclamation and mine-closure. Provincial, territorial, federal and Indigenous economic development organizations; geological surveys; as well as industry and mining associations actively participate in initiatives and partnerships with Indigenous communities.

INDIGENOUS KNOWLEDGE

Indigenous knowledge is understood as a body of knowledge built up by a group of Indigenous people through generations of living in close contact with the land. It can provide evidence and understanding that cannot be derived from other sources and is complementary to scientific data. Indigenous knowledge could include information related to the biophysical environment; social, cultural, economic and health issues; as well as Indigenous governance, traditional laws, customs and use of land and resources.

The Government of Canada runs several earth sciences programs that incorporate local Indigenous knowledge, including the survey capacity development program, Geo-Mapping for Energy and Minerals (GEM) GeoNorth Program and the CanmetMINING Green Mining Innovation Program. These programs provide a better understanding of the environment, optimize land use and provide certainty for investors. Additionally, these programs also help communities build their capacity and generate interest in earth sciences as a viable career option.

For example, through the Canadian Minerals and Metals Plan, Natural Resources Canada has worked with Indigenous organizations to increase mineral literacy and procurement opportunities for Indigenous businesses. Initiatives includes a Local Procurement Checklist, launched in March 2024, which is helping equip both the mining industry and communities with information, guidance and best practices on how to achieve greater Indigenous participation in the local mining procurement sector.

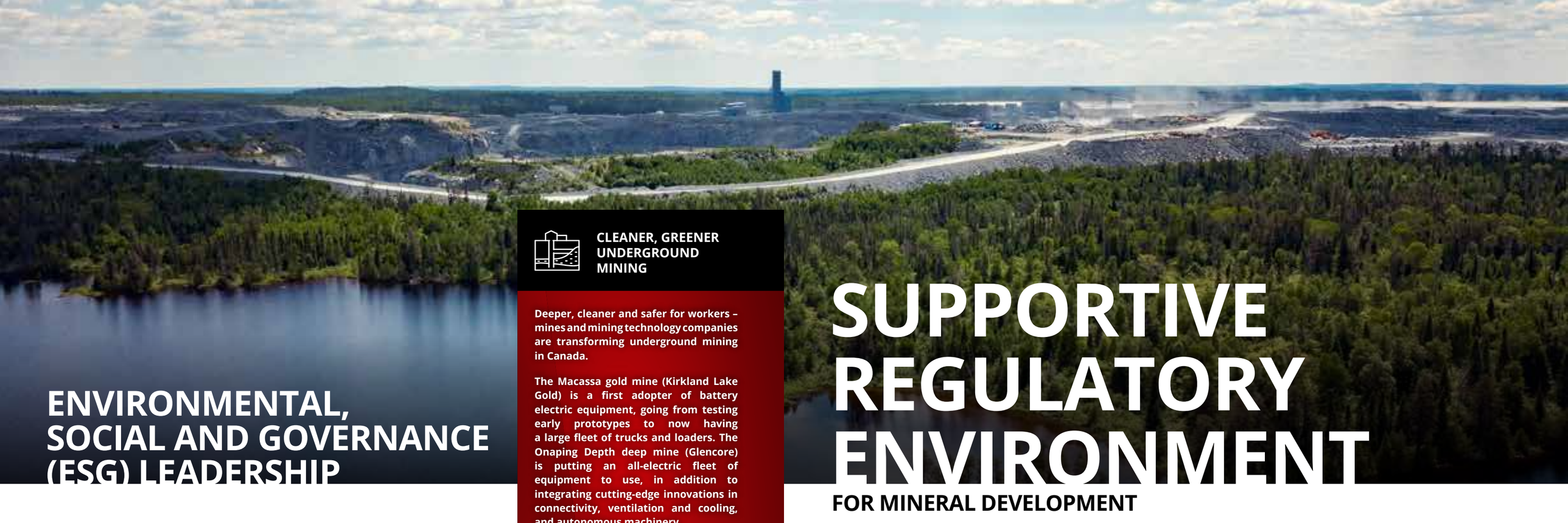
The Indigenous Natural Resource Partnerships (INRP) is another program supporting the economic reconciliation priorities set out by the Government of Canada. This program aims to increase the participation of Indigenous communities and organizations in the development of natural resource projects that support the transition to clean energy and a net zero future.

SOURCING FROM LOCAL AND INDIGENOUS BUSINESSES

With most producing mines and exploration projects in Canada located within 100 kilometres of an Indigenous community, Indigenous businesses are well situated to provide goods and services to the industry. At least 200 Indigenous businesses supply the extractive industry in Canada today, and there is an opportunity to grow this number to support further Indigenous business and community development and serve as a pathway to economic reconciliation.

INDUSTRY LEADERSHIP AND LOCAL PROCUREMENT

Canada's mining industry is leading by example in procuring from local and Indigenous businesses. Initiatives include sharing procurement information by hosting workshops with Indigenous communities to explain procurement procedures and available opportunities.



ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG) LEADERSHIP

Canada's minerals and metals sector recognizes that robust environmental, social and governance (ESG) performance creates value for local and Indigenous communities, not just shareholders. The industry's leadership has demonstrated a commitment to doing mining more sustainably and responsibly through the creation, promotion and adherence to ESG practices at home and abroad.

The Mining Association of Canada's (MAC) globally recognized Towards Sustainable Mining (TSM) responsible sourcing system supports mining companies in managing key environmental and social risks and opportunities.

TSM WAS THE FIRST MINING SUSTAINABILITY STANDARD IN THE WORLD TO REQUIRE SITE-LEVEL ASSESSMENTS AND IS MANDATORY FOR ALL MEMBERS OF THE ASSOCIATIONS THAT HAVE ADOPTED THE PROGRAM.

TSM is unique for its rigour and influence. Its reach is global – thanks to the fact that mining associations worldwide have adopted the system and many of its members of these associations voluntarily apply it in their overseas operations.

The Prospectors and Developers Association of Canada (PDAC) has created e3Plus – a program that encourages responsible exploration. Through online toolkits and resources, companies improve their social, environmental and health and safety performance.

Canada's minerals and metals industry also collaborates widely with academic institutions and sector associations to support the development of an inclusive and diverse workforce. Scholarships and mentoring programs promoting mining and geological sciences as a career choice for women, Indigenous Peoples, minorities and new Canadians have also been introduced. A number of industry advocacy groups, including the Mining Industry Human Resources Council, focus on these specific aspects of ESG.

CLEANER, GREENER UNDERGROUND MINING

Deeper, cleaner and safer for workers – mines and mining technology companies are transforming underground mining in Canada.

The Macassa gold mine (Kirkland Lake Gold) is a first adopter of battery electric equipment, going from testing early prototypes to now having a large fleet of trucks and loaders. The Onaping Depth deep mine (Glencore) is putting an all-electric fleet of equipment to use, in addition to integrating cutting-edge innovations in connectivity, ventilation and cooling, and autonomous machinery.

RAISING TRANSPARENCY STANDARDS

In force since 2015, the *Extractive Sector Transparency Measures Act (ESTMA)* requires that businesses annually report certain payments made to all levels of government in Canada and abroad in relation to the commercial development of oil, gas and minerals.

Since 2016, Natural Resources Canada has received over 2,500 reports from over 1,600 reporting businesses, making information on more than $559 billion in payments to governments publicly available for the first time.

SUPPORTIVE REGULATORY ENVIRONMENT

FOR MINERAL DEVELOPMENT

REGULATORY APPROVALS

Mining permits and most of the other authorizations for mineral exploration and mining activities fall under the jurisdiction of provincial governments, territorial governments for Yukon and the Northwest Territories, as well as the federal government for Nunavut.

Depending on the project, several federal regulatory requirements can apply. While the regulatory environment for mineral development in Canada includes multiple steps, the system is stable, reliable and predictable, underpinned by a commitment to modernize and harmonize regulations where appropriate.

Learning more about Canada's regulatory environment – and applying for provincial and territorial permitting and licences – is only an online search away.

PROTECTING SUPPLY CHAINS

While Canada continues to welcome foreign direct investment in critical minerals, an Investment Canada Act (ICA) policy was released in October 2022. The policy aims to clarify how the ICA is applied to investments by foreign state-owned enterprises and state-influenced enterprises into Canada's critical minerals and their supply chains. Foreign investors are encouraged to consult Innovation, Science and Economic Development for more information.

ENVIRONMENTAL ASSESSMENTS

Federal, provincial and territorial governments all have legislative frameworks that set out environmental assessment processes prior to the regulatory approval of some mineral exploration activities and all mine development proposals.

The result is the establishment of a fair, predictable and efficient process that enhances Canada's competitiveness, drives innovation and promotes partnerships with local and Indigenous communities.

TREATIES WITH INDIGENOUS PEOPLES

Treaties between the Crown (represented by the Government of Canada and/or the provincial or territorial government) and Indigenous Peoples are solemn agreements that set out promises, obligations and benefits for all parties. Aboriginal and treaty rights are recognized and affirmed in Section 35 of the *Constitution Act, 1982* and are also a key part of the *United Nations Declaration on the Rights of Indigenous Peoples*.

There are 70 historic treaties with First Nations, and approximately 25 modern treaties with Indigenous groups in Canada. Some of these treaties include, among other things, self-government. Treaties often include provisions related to resource development opportunities and participation in land and resource management decisions.

REQUIRED CONSULTATIONS

The duty to consult is a constitutional obligation of the Crown. Potential for adverse impacts to Indigenous and treaty rights must be considered, mitigated, and where appropriate, accommodated when conducting mineral exploration and development activities.

Although the responsibility for consultation and accommodation rests with the Crown, some responsibilities may be delegated to mining companies, for example, as part of a federal or provincial environmental assessment process.

GATEWAY TO THE WORLD

Canada has developed one of the largest and most reliable infrastructure and logistic systems in the world – fully integrated with the North American transportation network system and with direct maritime links to the Pacific and Atlantic nations.

Given the sizeable resources and heavy industries in Canada, the rail transportation sector has significant experience transporting heavy items, bulk commodities and containerized traffic over long distances.

MINING IS THE LARGEST USER OF CANADA'S RAIL BY BOTH FREIGHT REVENUE AND VOLUME.

The Canadian railway system is a 43,065-kilometre network that includes two private freight rail operators with extensive rail networks in both Canada and the U.S., making them truly North American rail operations.

DIRECT MARKET ACCESS

As a leading customer of Canadian ports, the minerals and metals sector benefits from direct maritime access to Europe, South America and Asia – including the shortest sailing time from North American to Asian markets through the Port of Prince Rupert. The inland Great Lakes provide easy access to several U.S. states. Most of Canada's largest ports are administered by port authorities, operating at arm's length from the federal government. Canada's 17 port authorities have storage facilities and links to rail and road networks to ensure rapid and secure movement of goods throughout North America.

The industry also relies on all-weather roads and highways to ship goods by truck, which plays a smaller yet vital role in moving mining products across the country's vast geography. Canada's road transportation system comprises more than 1.4 million kilometres of roads that are among the safest in the world. The Trans-Canada Highway is one of the longest highways in the world at 7,800 kilometres and links all provinces.

MAJOR INFRASTRUCTURE INVESTMENTS

To ensure that remote deposits can be unlocked, particularly in the north, the Government of Canada is making historic investments in infrastructure to improve trade corridors, including ports, highways and railways. Provinces and territories are also investing billions, in partnership with the federal government and independently. Thanks to these investments, the transportation networks required for the future of Canada's minerals and metals sector are being constructed.

CONNECTIVITY IS KEY: CANADA'S NATIONAL TRADE CORRIDORS FUND

The National Trade Corridors Fund, open to public and private organizations, provides funding for infrastructure projects across the country, including work to improve fluidity and performance of airports, ports, rail yards, transportation facilities and access roads.

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