The Mining Association of Canada | L'association minière du Canada

Critical Minerals, Canadian Advantage

Address to Newfoundland and Labrador's Mineral Resources Review 2021

November 25th, 2021

Thank you for the opportunity to speak with you today at Newfoundland and Labrador's premier mineral exploration and mining conference and exhibition. It has been some time since I addressed you last, although several of my colleagues have spoken at this event in recent years. I look forward to the next time when, I hope and expect, we will all be in person.

It would have been hard to predict just how all encompassing the impacts of COVID-19 would be on all of us individually, as a

nation and globally. The pandemic impacted all industries to some degree, and Canada's mining sector was not immune to its effects, but the past 20 months have highlighted the resiliency of our industry in the face of unprecedented challenges.

To be here just as the federal parliamentary cycle is resuming is timely, as the opportunity before our sector is immense. I appreciate this opportunity to share with you the latest stats and trends in Canada's mining industry. I also will provide an overview on how, with our high standards in sustainability and the sector's commitment to lower-carbon practices, we are extremely well positioned to play a major role in the fight against climate change, the most pressing issue affecting our world right now.

Our industry provides the building blocks for clean tech like wind turbines, solar panels, nuclear energy and EV batteries and there is no question that the world needs mining in order to achieve a greener future. At the same time, Canadian mining companies are increasingly recognizing the role they must play in lessening their carbon footprint and are taking the initiative to embrace innovative technologies and practices to do just that.

The federal government must take the opportunity to build on our strengths and support one of Canada's most essential industries, and I will outline how they can do so in just a few minutes.

But first, a reminder of just how significant our sector is. The mining industry has contributed greatly to Canada's economic

strength, directly employing over 370,000 workers across the country in mineral extraction, smelting, fabrication and manufacturing, and indirectly employing an additional 315,000. Proportionally, the mining industry is also the largest private sector employer of Indigenous peoples, providing over 16,500 jobs in communities across the country. In 2020, the minerals sector directly and indirectly contributed $107 billion, or roughly 5%, to Canada's total nominal GDP.

When Canadian mining thrives, other critical sectors do too. Annually, the industry accounts for approximately 50% of total rail freight revenue generated and is the largest single shipping sector by volume by both rail and marine modes. In fact, *The Financial Post* recently reported that rail freight volumes and revenues have increased due in large part to a boost from our sector as a result of international demand for our mineral and

metal products. Canada's railway stocks make up part of many Canadians' retirement investment portfolios, and their consistently strong performance is attributable in large part to the railways' mining customers.

Newfoundland and Labrador are substantial contributors to these numbers. Canada's fifth largest mining province, the production value of the provincial industry in 2020 was just shy of $3 billion. That same year, the industry invested more than $830 million in mine development – 7.5% of the national total – suggesting this strength and performance is poised to continue into the future. For generations, mining has played an essential role as an employer and economic contributor in the province.

Mining's value to Canada doesn't stop at Canada's borders, however. Canada's mining sector has investments in over 100

countries worldwide and travelling with and working for the sector are the thousands of Canadian mining supply and services companies.

Around the world, countries want Canadian investment and our mined materials. They want us for how we go about our business, how we work with communities and raise standards. Canada is one of the safest jurisdictions for mining in the world, and we are recognized for bringing these standards and practices wherever we go.

In 2004, the Mining Association of Canada launched the *Towards Sustainable Mining* initiative, or TSM. Through the development of a range of performance indicators touching on aspects such as tailings management, climate change, biodiversity conservation and Indigenous and community

engagement, our member companies began measuring, reporting and assuring how they were doing against demanding criteria. We set up a multi-interest advisory panel, consisting of representatives from Indigenous groups, communities where the industry is active, environmental and social NGOs, just to name a few, to further enhance the transparency and credibility of the program and to hold us to account.

This past spring, we introduced the new *TSM Climate Change Protocol*, designed to minimize the mining sector's carbon footprint, while enhancing climate change disclosure and strengthening the industry's ability to adapt to climate change through the development of a first-in-the-world mining adaptation guidance document.

We are committed to being a constructive partner in the fight against climate change and this new protocol requires companies to make commitments, set targets and take action consistent with the ambitions of the Paris Agreement and, at higher levels of performance, make commitments corresponding with the societal ambition to achieve net-zero emissions by 2050.

Our sector is embracing the challenge of improving its environmental practices. Mining heavyweights like Vale and Rio Tinto – both with significant operational presence in the province – have publicly committed to reach net-zero emissions by 2050 and are taking significant measures to reduce emissions.

It is clear that our industry recognizes the role it must play in combatting climate change. As an energy intensive industry, we know we have an important role to play in lessening our carbon footprint, and this new TSM protocol is intended to do just that.

TSM is also now being shared and applied by nine other Chambers of Mines around the world, including by mining heavyweights like Brazil and Australia. As the program continues to expand to new jurisdictions, the new *TSM Climate Change Protocol* will not only drive improved environmental practices here in Canada, but also internationally. That's called global leadership. And Newfoundland and Labrador share in this leadership. For example, in 2019, Vale's Voisey's Bay won a TSM Leadership Award, a distinction granted only when a facility meets or exceeds a Level A ranking in its results across

all TSM protocols. These results must be externally verified to be eligible for this recognition.

Looking forward, the opportunity for responsible growth in our sector is significant. And the obligation to grow responsibly has never been more clear as the amount of mined material needed to supply the transition to a net-carbon-neutral future is considerable.

The World Bank forecasts up to 500% increases in the production of green mineral and metal inputs to produce the clean technologies essential to limiting global temperature rise to 2 degrees Celsius. It is in both Canada's and the world's best interest to expand domestic production of low carbon Canadian minerals and metals to meet this growing need as sustainably as possible.

The question is not whether we require minerals and metals to reach our climate goals, but rather if Canada will be the supplier the world needs.

As a recognized global leader in responsible mineral production and with markets and consumers increasingly demanding cleaner and greener materials at every stage of the supply-chain for the products they consume, Canada is well placed to become the supplier of choice for these critical inputs if we can create the right domestic investment conditions for success. With 82% of our electricity generation coming from renewable or non-GHG emitting sources, including nuclear energy fuelled by Saskatchewan's world class uranium mining industry without which the world will never achieve its climate change targets, Canada produces some of the lowest carbon intensity mineral and metal products anywhere in the world and can and should

play a much more significant role in providing the materials the world needs to get to net-zero.

The comparative carbon intensity competitive advantage that Canadian minerals and metals have over those produced in many other jurisdictions globally is significant and even if mined off-grid, minerals processed in Canada are among the lowest carbon-intensity in the world.

SKARN Associates, a consultancy focused on connecting ESG analytics and mineral economics, produces data sets that enable the majority of global production for nickel, gold, iron ore, metallurgical coal, copper and aluminum to be benchmarked on a basis of carbon competitiveness at either the mine site, company or national level. Through original

research, SKARN has found that Canada produces some of the lowest-carbon intensity minerals and metals globally.

For example, Canada is a top-decile low carbon intensity source of nickel and 8 to 15 times less carbon intensive on average than nickel produced in Indonesia or the Philippines. This is most certainly the case with nickel extracted from Voisey's Bay, smelted in Sudbury, and refined at Long Harbour. In fact, Intertek Group has independently confirmed that the carbon footprint of Vale Long Harbour nickel rounds is about one-third the Nickel Institute average for Class 1 nickel – this is a huge advantage at a time when the world needs more nickel and fewer GHG emissions. What's more, that nickel has the potential to produce electric vehicle batteries, further reducing downstream carbon emissions in the transportation sector, helping Canada and the world achieve their carbon abatement

targets, while growing domestic economies, providing high-paying jobs, and contributing to domestic prosperity.

Another important example is iron ore and its critical role in steel production, essential to clean technology. A two-megawatt windmill contains 260 tonnes of steel requiring 170 tonnes of coking coal and 300 tonnes of iron ore. On average, 900 kilograms of steel is used in every car – and will continue in electric vehicle production – requiring roughly 1.6 tonnes of iron ore. Rio Tinto IOC's and Tacora Resources' pellets and concentrate are high grade products with a clean chemistry, which helps to lower the carbon footprint, compared to lower quality grades and forms of iron ore, when used in the iron & steel industry. As the world deploys more clean technology, such as wind turbines, electric vehicles and the batteries that power them, the responsibly produced and lower carbon nickel

and iron ore in Newfoundland and Labrador will be in greater demand.

Our leadership in sustainably producing the materials, particularly critical minerals like cobalt, copper, nickel, uranium, and aluminum, is undeniable, but there are other major reasons beyond climate change for Canada to increase its production of them. One reason revolves around the increasing geopolitical uncertainty that has magnified the precariousness of existing sources of critical minerals, vital in telecommunications, healthcare, computing, and clean technologies.

Recently, and with added urgency since the onset of the COVID-19 pandemic, governments across the globe have started assessing the vulnerability of their respective economies to

supply shocks for critical minerals: minerals and metals that they cannot source in sufficient volume, or at all, from within their borders, but on which the proper functioning of their economies are dependent.

Elevated security of supply concerns has caused Canada's allies, including the US, Europe and Japan, to re-evaluate and take action to reduce their exposure to the risk of supply shocks that can have major impacts on their broader economies. They are looking to Canada to be a reliable, responsible and trusted source in an increasingly uncertain world.

While critical minerals typify this, no set of materials characterizes the above security of supply dilemma more than Rare Earth Elements, or REEs, used in a wide range of essential

battery, medical, energy, defense and advanced manufacturing applications.

To date, China has dominated the market for these key materials, controlling a majority of their production and distribution, resulting in an over-reliance by the rest of the world on one country for procurement. Simultaneously, Canada's fiscal and regulatory competitiveness has been declining steadily over the last decade, as consecutive reviews of environmental legislation and new regulations have created uncertainty and a growing compliance burden. This can't continue. We cannot compete with Chinese state-owned enterprises, for which competitiveness is a secondary concern, without targeted government action to develop, protect and sustain REE and critical minerals supply chains.

The global pandemic has brought the security of supply vulnerabilities into sharp focus for many countries, including Canada, and combined these trends have accelerated the desire of Canadians to source and produce locally, with greater self-reliance.

Nowhere is the opportunity before Canada – and Newfoundland and Labrador – in critical minerals and REEs more clear than in the battery space. Clean Energy Canada's recently released report on the topic highlighted the urgent need for increased government support of Canada's mining sector given its key role in providing the materials necessary for low-carbon technologies, specifically EV batteries. In calling for the government to develop a Battery Metals and Materials Action Plan for the mining industry to allow it to sustain and expand EV mineral and metal production and processing while

decarbonizing and supporting world leading sustainability, Clean Energy Canada focused on the urgent need for government to support Canadian companies in having access to these strategic materials and minerals for economic, environmental, geopolitical, and national security reasons.

Canada has the potential to be able to create the lowest carbon-intensity lifecycle battery EV in the world, due in large part to its supply of critical minerals and metals and commitment to sustainable mining standards. With Ford, GM and Fiat Chrysler announcing EV-related investments of more than $1 billion each in Ontario over the past year and with Canadians highlighting climate change as one of the most important issues affecting the country, it is clear that there is widespread and diverse support for the government to act in the critical minerals space. The public is certainly on board as

recent polling data found that almost 90% of those surveyed by Abacus Data like the idea of Canada being a preferred source for critical minerals and would like to see government take a number of steps to support this approach.

As I've made clear, our industry is well positioned to support many public policy priorities important to all political parties, including critical minerals development and the low carbon transition, and over the past several years we've seen some positive momentum.

Several provinces have prioritized investments in critical minerals and the development of rare earths and battery industries. The federal government has implemented programs and policies, including most recently through the spring announcement of Canada's Critical Minerals list, the passage of

net-neutrality legislation, Budget 2021's expansion of the Strategic Innovation Fund - Net Zero Accelerator to $8 billion, and the introduction of tax incentives to support the establishment of a domestic battery electric vehicle supply chain. Specific supports targeting REEs, like the establishment of a Critical Minerals Centre of Excellence that will focus on coordinating federal policy and programs on critical minerals and $36.8 million over three years for federal research and development to advance critical battery mineral processing and refining expertise, are modest but positive steps as well.

More can be done to truly encompass the government's "mines to mobility" objectives. By providing support specifically for mining electrification, clearer and more effective permitting processes and incentives for the discovery of new battery

mineral and metal deposits, Canada would clearly signal to the world that it is committed to being a global leader in this space.

Just as the federal government has signalled with a new policy statement that new thermal coal projects would “likely…cause unacceptable environmental effects” and “will inform federal decision making on thermal coal mining projects,” the government could also signal that critical minerals projects would likely provide positive environmental benefits and that such benefits would also inform decision making. Such a policy statement would send a powerful signal to international investors that Canada welcomes new mine and mineral processing development in critical minerals.

Looking forward, there are a number of steps we will continue urging the federal government to take to enhance our

industry's competitiveness and support its role in a greener future, including, just to name a few, by enhancing public geoscience investment focused on critical minerals and doubling the Mineral Exploration Tax Credit for exploration focused on critical minerals, as was promised in the election platform.

Expanding on Budget 2021's proposed corporate tax reduction for the manufacturing of zero-emissions technologies to include the extraction and processing of value-added processing activities of the materials on Canada's list of critical minerals is another important step the federal government should take to support its stated EV and climate objectives and strengthen and expand Canada's critical mineral extraction and manufacturing supply chains. By providing necessary administrative and policy support to relevant agencies to prioritize and accelerate

reviews of critical minerals' projects the government also has the opportunity to place Canada at the forefront of sustainable minerals development.

In tandem, Canada and the US have finalized and are implementing a Joint Action Plan on Critical Minerals Collaboration with the intent to strengthen pre-existing supply chains where possible and establish new ones to bolster greater North American security of supply for critical minerals. Achieving success for Canada in the critical minerals space has multi-level, multi-partisan support, with the governments of Quebec, Saskatchewan and Ontario moving forward in supporting critical mineral projects, developing rare earth processing capacity and supporting EV production amongst other complementary actions, reflective of the spirit of the Canadian Minerals and Metals Plan.

The global climate will benefit from EVs produced with low carbon Canadian materials. Whether for domestic or international EV production – and ideally both – one of the greatest climate actions Canada can take in support of Paris Accord objectives is to maximize domestic production of low carbon metals and materials needed to meet projected clean technology demand.

It's time for Canada to be ambitious and seize the moment. With our leadership in sustainable mining standards and with targeted government support, Canada's mining industry can provide the responsibly sourced minerals and metals vital to getting us to net-zero. Thank you.