



Critical Minerals and Metals for Canada's Future: Securing the Resources Without Which Canada's Carbon Transition Won't be Possible

"Please mine more nickel... Tesla will give you a giant contract for a long period of time, if you mine nickel efficiently and in an environmentally sensitive way. So hopefully this message goes out to all mining companies. Please get nickel."

*Elon Musk,
Chief Executive Officer, Tesla*

Recommendation 1: Unlock critical mineral potential through innovation and industrial policy

- Establish an interdepartmental joint government-industry task force to study and report back, in one year, additional policy options to position Canada as a leader in the production and processing of critical minerals – both for Rare Earth Elements (REE), and other strategic minerals and metals. This review should include a benchmarking exercise of Canada's mining fiscal and regulatory policies vis-à-vis competing jurisdictions.
- Significantly enhance funding for Natural Resources Canada's CanmetMINING to develop state of the art REE identification, extraction and refining processes, including from recycled existing mine waste streams.
- Commit to a whole-of-supply chain approach, including supports for downstream market development and value-added production, which will drive demand for upstream REE production, until China's control of the market is loosened.
- Improve cash flow by establishing 10% refundable investment tax credits on investments in pre-production mining expenses and new mining and processing assets (class 41, 41.2 and 43).
- Implement a Canadian Foreign Derived Intangible Income (FDII) tax reduction to incent the export of Canadian mineral products. The rule should be similar in scope to the US FDII rules and bring the tax treatment of Canadian exporters in line with their US counterparts.

Recommendation 2: Create a world class rail data regime and aggressively develop northern infrastructure

- Require class 1 railways to publicly disclose rail service output by carrier, subdivision, commodity, car type and train type, and the following capacity metrics:
 - Slot capacity: the total number of train slots possible on each subdivision per reporting period
 - Train start capacity: the total number of train-starts possible on each subdivision per reporting period
 - Gross Ton Mile capacity: the number of tons transported by a rail carrier over a subdivision, by commodity/car type/train type, during a reporting period
- Enhance CanNor's capacity to support foundational economic development infrastructure such as roads, including the Gray's Bay Port and Road, the Slave Geological Province Corridor, and those to strategic critical mineral projects, including NorZinc's Prairie Creek zinc and Avalon's Nechalacho REE projects.
- Advance in time, from over eight years to over four, the recent \$400 million renewal of the Trade and Transportation Corridor Initiative northern envelope.
- Building on the 2019 pledge for highspeed internet connectivity, commit to connecting all remote communities by road transportation by 2030.

Recommendation 3: Accelerate Industrial Decarbonization

- A five year investment of at least \$250 million for remote and northern off-grid industrial electrification to accelerate improvements in energy and fuel efficiency, and drive to the maximum extent possible the scalability, deployability, capacity and storage capabilities of clean power generation in northern Canada, including small modular nuclear reactors.
- Expand credit generating opportunities for mining under the Clean Fuel Standard.
- Support territorial planning for hydroelectricity projects, including the NWT Taltson project and the Kivalliq Hydro-Fibre Link.
- Direct Output-Based Pricing System carbon revenues (1) back to companies that paid them to support clean technology investments and; (2) into a sector-level fund to support the development of lower carbon technologies and fuels, and energy and fuel efficiency, with a focus on research and technology improvements in the resource sector.

Recommendation 4: Strengthen Indigenous participation in mining

- Increase funds for skills training and entrepreneurship to assist Indigenous peoples in securing opportunities in mining.
- Establish/improve mechanisms through which governments share a portion of the revenues generated from royalties, mining taxes and/or fees in their jurisdiction.
- Strategically deploy government procurement as a tool to drive Indigenous economic reconciliation.

The Economic Cost to Canada of COVID-19:

Following the federal response to COVID-19, Canada's public finances face a massive reduction in federal revenues juxtaposed against the largest annual federal spending program in the post-war era. As uncertainty abounds, with concerns over pandemic resurgence, there is broad recognition that government action must play a critical role in the prudent return to economic normalcy, and strategic investments are required.

The Canadian mining industry is well positioned to support many of the government's 2019 mandate letter priorities, including a low carbon transition, and acknowledges that significant work – in some cases over multiple years – has gone into positioning Canada for longer term and sustainable economic success through critical minerals partnerships and the Canadian Minerals and Metals Plan. These commitments underscore the government's recognition that without a sustainable and competitive critical mineral and metal manufacturing supply chain, Canada's competitiveness as a destination for advanced technology manufacturing is significantly diminished.

Building off the existing strengths and momentum of the 2019 mandate letters, the government should secure and strengthen Canada's critical mineral extraction and manufacturing supply chain through targeted investments that enhance its economic competitiveness and secure and create meaningful and high paying jobs.

1. UNLOCK CRITICAL MINERAL POTENTIAL VIA INNOVATION AND INDUSTRIAL POLICY

Increased geopolitical uncertainty – amplified by COVID-19 supply chain disruptions – has magnified the precariousness of existing sources for many primary materials and the goods on which Canadians depend. Many countries have classified as critical minerals the primary materials fundamental to their economic security, but which they cannot procure in sufficient volume or from within their own borders. While critical minerals such as cobalt, copper, nickel, uranium, and aluminum typify this, no set of materials characterizes the dilemma more than Rare Earth Elements (REE), used in a wide range of essential battery, medical, energy, computing, defense and advanced manufacturing applications.

To date, China has coerced the market for these materials, developing monopoly-like control over their production and distribution, thus rendering the rest of the world reliant on China for procurement. Simultaneously, Canada's mining 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. Fortunately, Canada possesses the

resources, expertise and value-added smelting and refining supply chains to recapture some of this market with the right policy supports.

To advance the stated objectives of the Canada/U.S. Joint Action Plan on Critical Minerals Collaboration, and bolster Canada's competitiveness as the world class supplier of sustainably sourced and manufactured critical minerals, MAC recommends:

- **Establishing an interdepartmental joint government-industry task force to study and report back, in one year, additional policy options to position Canada as a leader in the production and processing of critical minerals – both for REEs, and other strategic minerals and metals. This review should include a benchmarking exercise of Canada's mining fiscal and regulatory policies vis-à-vis competing jurisdictions.**
- **Enhance funding for Natural Resources Canada's CanmetMINING to develop state of the art REE identification, extraction and refining processes, including from recycled mine waste streams.**
- **Commit to a whole-of-supply chain approach, including supports for downstream market development and value-added production, which will drive demand for upstream REE manufacturing, until China's control of the market is loosened.**
- **Improve cash flow by establishing 10% refundable investment tax credits on investments in pre-production mining expenses and new mining and processing assets (class 41, 41.2 and 43).**
- **Implement a Canadian Foreign Derived Intangible Income (FDII) tax reduction to incent the export of Canadian mineral products. The rule should be similar in scope to the US FDII rules and bring the tax treatment of Canadian exporters in line with their US counterparts.**

2. SUPPORT TRANSPORTATION AND DEVELOP NORTHERN INFRASTRUCTURE

Beyond COVID-19-related delays, Canada's supply chain experienced multiple disruptions in 2019 and 2020. As the largest industrial customer group of Canada's freight railways, an efficient logistics supply chain is essential to overall business competitiveness. The *Transportation Modernization Act* made provision for a permanent rail data disclosure regime, and the government should require Class I railways to disclose useful and meaningful metrics that will improve railway performance and rebalance relations with their customers.

Infrastructure investment decisions that recognize northern challenges and

opportunities through the Trade and Transportation Corridors Initiative (TTCI) and the Investing in Canada Plan have been welcome in recent years, though the need is greater than the funds allocated. The need to address the northern infrastructure deficit was underscored in the 2019 mandate letters, and MAC encourages government to deliver on these priorities.

To advance the reliability of the logistics supply chain, and access to Canada's remote and northern regions, government should:

- **Be bold in requiring Class 1 railways to publicly disclose rail service output by carrier, subdivision, commodity, car type and train type, and the following capacity metrics:**
 - **Slot capacity: the total number of train slots possible on each subdivision per reporting period**
 - **Train start capacity: the total number of train-starts possible on each subdivision per reporting period**
 - **Gross Ton Mile capacity: the number of tons transported by a rail carrier over a subdivision, by commodity/car type/train type, during a reporting period**
- **Enhance CanNor's capacity to support foundational economic development infrastructure such as roads, including the Gray's Bay Port and Road, the Slave Geological Province Corridor, and those to strategic critical mineral projects, including NorZinc's Prairie Creek zinc and Avalon's Nechalacho REE projects.**
- **Advance in time, from eight years to four years, the recent \$400 million renewal of the Trade and Transportation Corridor Initiative northern envelope.**
- **Building on the 2019 pledge for highspeed internet connectivity, commit to connecting all remote communities by road transportation by 2030.**

3. ACCELERATE INDUSTRIAL DECARBONIZATION

In mining, there is a direct correlation between the remoteness of the location of operations and emissions intensity. Remote and off-grid mining companies are virtually exclusively reliant on diesel for power generation and haul-fleet operations. These operations are the most exposed to carbon pricing, given the extremely limited optionality they have for fuel-switching. For this reason, MAC has long called for the need to be sensitive to remote operations exposure to carbon costs, including in the proposed Clean Fuel Standard (CFS).

To support the industry in its transition to lower carbon operations, and deliver on

the commitment to make Canada home to the cleanest mines in the world, MAC recommends:

- **A five year investment of at least \$250 million for remote and northern off-grid industrial electrification to accelerate improvements in energy and fuel efficiency, and drive to the maximum extent possible the scalability, deploy-ability, capacity and storage capabilities of clean power generation in Northern Canada, including small modular nuclear reactors.**
- **Expanding credit generating opportunities for mining under the CFS.**
- **Supporting territorial planning for hydroelectricity projects, including the NWT Taltson project and the Kivalliq Hydro-Fibre Link.**
- **Directing Output-Based Pricing System Carbon revenues toward two areas: (1) back to companies that paid them to support clean technology investments and; (2) into a sector-level fund to support the development of lower carbon technologies and fuels, and energy and fuel efficiency, with a focus on research and technology improvements in the resource sector.**

4. ACCELERATE INDIGENOUS INCLUSION IN MINING

Enhancing the participation of, and partnerships with, Indigenous peoples in our sector remains a priority. Our members are committed to ongoing, meaningful engagement and maintaining respectful relationships with Indigenous communities.

A key mechanism through which economic opportunities have been created is through the estimated 455 company-community agreements signed between companies and Indigenous communities or governments since 2000. These voluntary agreements are progressive in their collaborative scope, particularly for production-stage projects, and are increasingly recognized internationally as best practice.

The mining industry is the largest private sector employer of Indigenous peoples in Canada on a proportional basis, and a major partner to Indigenous businesses. For example, Teck Resources spent approximately \$225 million with suppliers who self-identified as Indigenous in 2019.

To strengthen Indigenous participation in mining, government should:

- **Increase funding for skills training and entrepreneurship to assist Indigenous peoples in securing opportunities in mining.**

- **Implement the pledge to establish/improve mechanisms through which governments share with communities a portion of the revenues generated from royalties, mining taxes and/or fees.**
- **Strategically deploy government procurement as a tool to drive Indigenous economic reconciliation.**