



February 07, 2020

The Honourable Bill Morneau
Minister of Finance
House of Commons
Government of Canada
Ottawa, Ontario
K1A 0A6

Re: Budget 2020 and Critical Minerals Supply Chains for a Clean Technology Future

Dear Minister,

On behalf of the Canadian Rare Earth Elements Network (CREEN), I am writing with great urgency and in support of the Canadian government's efforts around critical minerals supply chains. Recent global developments underscore the importance of an immediate and concerted drive toward a comprehensive strategy that would send a powerful signal to market and position Canada for success.

While much has been made of the important geopolitical aspects that are driving the Australians, EU, and our U.S. colleagues to take action, we believe that a Canadian strategy well-structured and informed by important stakeholders can inspire an economic revival and attract new investment unlike anything that has been seen in the country for decades. Based on our members' active efforts over the past dozen years and our close collaboration with Canadian government officials, we see a time-sensitive window of opportunity for Canada to move forward and become a leader in creating new critical minerals supply chains. Since many of these minerals are vital for new renewable energy and electric vehicle technology, this will also support Canada's efforts on climate change.

Furthermore, in consultation with colleagues from the senior ranks of the Canadian business community, we are fully convinced that more strategic action on critical minerals supply chains supports a broader Canadian *economic growth plan*, details of which we offer in the Appendix.

In summary, it is strongly suggested that the Government of Canada establish a budget framework in the order of \$200 million over a 5-year period, focused primarily on developing and demonstrating advanced material processing technologies, trade promotion in attracting downstream supply chain demand to Canada, and education to ensure human resources are here to establish and grow these supply chains. This investment would take any number of forms including direct investment including into academic research, tax incentives and loan guarantees, and other incentives as opposed to just hard dollars on development work.

More specifically we recommend:

- Appointment of a lead Minister for the critical minerals file. This effort should be championed by the Department of Innovation, Science and Economic Development (ISED), as we feel it vital that the centrality of the economic, innovation and clean technology message be clearly articulated. The effort would of course be delivered in conjunction with Natural Resources Canada, who are currently tapped as lead during the Critical Materials Task Force review. The primary rationale for this leadership recommendation is premised on the recognition that

the probability of success in capturing real value is significantly increased with ‘Demand Pull over Supply Push’ strategies and plans. The important role of this Minister and team is to coordinate across all federal departments, offices and work with a public-facing industry stakeholder group.

- Establish a ‘*Critical Minerals Office*’ under the leadership of an internationally-respected, federally-appointed, executive who is mandated to develop clean technologies that enhance climate change objectives and drive the development of a critical minerals supply chain in Canada with North American and global partners, as done by other nations. This Office would be ‘staffed’ by experts from government, industry and academia.
- The proposed \$200M commitment by the government can be followed up with funds to match by industry and will provide adequate resources to allow for execution of the plan and demonstrate serious commitment to national and international stakeholders. Companies like Tesla, Honda, BMW, and Hyundai and their suppliers and sub-suppliers typically prefer to locate close to sources of supply as well as downstream markets and where the policy and regulatory regime are clear. With the confidence in demand, further upstream Canadian material and processing production in the supply chains will naturally be facilitated.
- We encourage the Government to announce a Phase 1 in the upcoming budget that would entail a formal political statement announcing the establishment of a *Canadian Critical Minerals Office* with associated funds. Phase 2 could be launched in the third or fourth quarter of 2020, with specific program and project initiatives identified.
- Empower the new Office to perform a baseline analysis of all government policies, federal and with encouragement provincially, affecting the critical minerals industry and suggest short and longer-term improvements.

We are very confident that our recommendations are aligned with the recent mandate letters that specifically highlight critical minerals supply chains. Prime Minister Trudeau has demonstrated unshakeable commitment to the global environmental agenda. We believe that an investment as described above and in appendix, will catapult the country as a leading global clean technology hub, super-charge Canada’s innovation and smart manufacturing economy, incent inward investment, energize regional economies and show major industrials that Canada means business.

Respectfully submitted,



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APPENDIX

CREEN has given much thought on how to help Canada lead this economic transformation opportunity, based on its members' active efforts in the process technology, project development and market development activities over the past dozen years. The recent joint announcement between President Trump and Prime Minister Trudeau, in addition to the plethora of news on the matter demonstrate the growing dependence on critical minerals for defense, industrial, clean technology (e.g. automotive, energy storage, sensor and information processing/display applications), pharmaceutical and other applications.

As a reference for how others around the world are moving quickly to capitalize on the opportunity, the Governments in Australia, the EU and UK, in collaboration with their industries and academia, have been proactive in their efforts to secure their countries economic priorities.

As one example, the UK Government will invest up to £246 million to develop batteries that are cost-effective, high-quality, durable, safe, low-weight and recyclable. They are creating an £80 million automotive battery industrialization centre – the first of its kind in the UK. It will allow companies to quickly develop their capabilities to manufacture batteries and get them to market, scale up and go global.

There is growing demand for batteries for electrification, with the market estimated to be worth £5 billion to the UK and £50 billion to Europe by 2025. In the UK this is driven in part by government's plan to ban new conventional petrol and diesel vehicles by 2040 to be replaced by electric and zero emissions vehicles. While the government investment will focus on the automotive sector initially to meet its commitment and the growing global demand for electric vehicles, this will also help advance battery development for other applications for an electrified economy.

Recognizing their geographic supply chain advantage to important Asian markets, the Australians last month announced a "Critical Minerals Facilitation Office" they have tasked to take the lead in ensuring Australia pools all relevant national horsepower through a centralized conduit.

These are only small examples of real actions governments around the world are taking today. We believe that Canada has a unique opportunity not only to meet but exceed these efforts. We have the talent, institutional and legal frameworks and unmatched ambition.

CREEN would recommend the following:

- The Office should be comprised of experts from government, industry and technical critical material and industrial sectors, and multidisciplinary academia to set nearer and longer goals and targets focused on creating an enhanced supply chain and downstream technology and manufacturing in and for Canada and its various trading partners.

- The Office's mandate can be staged in phases. Phase 1 would have an initial mandate to provide specific recommendations on fiscal, regulatory and policy reforms required to make Canada competitive in the critical minerals space as well as fine-tune strategies and deliverables, look at international models
- Phase 2 (~Fall '20) could see certain pilot projects move forward through established mechanisms such as SDTC and NSERC to certain operations, technologies, including the potential retrofit of the underutilized automotive plants in either Oshawa or Oakville. While proven and creative financial and policy mechanisms (e.g. tax and other subsidies), we strongly embrace a full Team Canada approach is needed to ensure Canada's energy transition/clean technology leadership and economic competitiveness on the world stage
- Champion a national program for electric vehicle incentives and lever reliable Canadian-'controlled' REE-supply chains to encourage production in Canada
- Encourage major downstream manufacturers (e.g. Magna, Linamar, Honda, Toyota), aerospace, bus and heavy equipment producers to participate with an eye on plant relocations to Canada or longer-term commitments to demand. These companies should also be encouraged to invite/compel their suppliers/supply chain partners (e.g. motor producers such as Bosch, Brose, Valeo)
- Introduce a form of 'super flow-through' shares to facilitate access to financial markets, structuring funds to permit allocation to downstream processing developments, demonstrations, environmental activities.
- Ease access to established funding programs such as STDC, possibly dedicating a pocket of funds for critical material supply chain-related initiatives.
- Extend and expand current Canadian REE R&D Initiative, currently in its fifth year. The initial program, launched in 2015, was relatively small but broadly scoped such that it was inadequate to champion pilot plant and demonstration projects.
- Champion REE-Supply Chain trade missions to Japan, Korea & Europe where distinct advantage with certain supply chain links already in existence or in friendly jurisdictions nearby.
- Regulation & Permitting: in collaboration with Provincial authorities, update mining regulations to recognize critical minerals as a distinct sector to better streamline and accelerate project and process development permitting.
- Secondary Sources -- Encourage, including incenting as needed, uranium, oil sands, and fly ash producers to strongly consider processing secondary streams (these have traditionally been seen as waste materials) for REEs and other critical elements, including addressing how best to address perceived and practical concerns.
- Monazite -- Review policies around the importation and processing of REE-rich monazite ore and facilitate radioactive material storage; Canada has the regulatory framework in place.
- Encourage universities to focus on mid- and downstream processing, including sponsoring multi-discipline participation in research, workshops and conferences. Develop the educational programs and critical skills required within the rare earth supply chain.

- The Critical Materials Supply Chain mission and budget should be channeled through an appropriate economic development department e.g. ISED in conjunction with NRCanada (reflecting the Demand Pull over Supply Push strategy) and joined by other business / industry-oriented Government departments / agencies / entities particularly with respect to the downstream portions of the supply chain and related initiatives.
- This budget envelop would not cover funds/incentives needed to transform or re-land major industrials & the auto industry (e.g. motor production, battery production, EV assembly, etc).

Canada has established a profile in established international rare earth and other critical material supply chain related fora, including the International Standards Organization, Rare Earth International Association, NATO's Advanced Vehicle Technology panels, the US Critical Materials Institute and numerous others. Canada's mining and metallurgical reputation is widely held in high esteem across the globe.

The real opportunity, acknowledging there are challenges, is for Canada to capture the full value of its natural critical material resources, industrial capacities and human resources capabilities, be it economic and carbon reduction terms. Canada can establish cost-competitive, reliable rare earth and other critical material-component supply chains.

We hope this letter outlines a path and partnership for government and industry to execute a winning strategy that will put Canada on the global stage.