



To: Whom It May Concern

Subject: Feedback on BC's Critical Minerals Strategy

Date: November 5, 2023

There is no doubt that the world is witnessing a fierce competition for skilled workers and business opportunities. The US has enacted the Inflation Reduction Act, while Europe has launched the European Green Deal, to cope with the challenge posed by China's strategic use of incentives and subsidies to consolidate and expand its global leadership in manufacturing, especially in the fields of batteries and rare earth minerals.

The inflation reduction act, passed by the US Congress, demonstrates the importance of a coherent and comprehensive strategy for securing the supply and processing of battery minerals. These minerals are essential for the transition to a low-carbon economy and for maintaining the competitiveness and security of the US in the global market. The act outlines a vision and a roadmap for achieving this goal, as well as providing funding and incentives for domestic production and innovation.

To maintain our edge in the international competition for business attractiveness and human capital, British Columbia needs a holistic set of strategies that address the diverse challenges and opportunities we face. We cannot rely on our natural resources or our geographic location alone to secure our economic future. We need to invest in innovation, education, infrastructure, and social inclusion to ensure that we can attract and retain the best talent and businesses in the world. This paper outlines some of the key policy areas that require urgent attention and action from our government and stakeholders.

The current mine permitting system as described in the British Columbia Mines Act does not take into account the scale of the proposed mining activities. This means that small-scale operations face the same regulatory requirements and costs as large-scale ones, which creates a disproportionate burden on them. This may discourage innovation and investment in the mining sector, and reduce its competitiveness and sustainability.

BC is a province that faces both challenges and opportunities in the global mining sector. On one hand, it has high labour costs and high technical skills, which require it to leverage technology to remain competitive. On the other hand, it has a strong reputation for mining innovation, as many of its graduates have contributed to mining projects around the world. To sustain and improve this position, BC should invest in some of the following research areas:

- Small modular processing plants that can be installed rapidly and effectively in remote locations
- Advanced process automation technologies that can enhance production, lower costs and increase safety
- Mineral reclamation, both from consumer waste and tailings, that can recover precious metals and reduce environmental impacts

Increasing funding to research is not only a sound economic decision, but also a strategic one for BC. It has been proven repeatedly that research spending has a positive impact on the economic performance of the regions involved. Moreover, it attracts talented and motivated people to the province, who can then find career opportunities in the mining sector.

British Columbia has a rich endowment of mineral resources that can contribute to its economic development. However, not all mineral discoveries are feasible to exploit, as they depend on the size and grade of the ore body. Conventional processing technology often makes small, high-grade deposits unprofitable due to the high upfront costs. A possible technical solution is to use small, modular processing plants that use automation to reduce the capital equipment costs. Moreover, high-grade deposits produce less waste, which lowers the environmental impact of extraction. The end of life impact is also minimized, as there is less need for tailings management, and the plant can be easily relocated for reuse in other projects, enhancing the circularity of the modules and further reducing environmental impacts.

One of the challenges of mining in remote communities is to attract and retain a skilled workforce that can enjoy a high quality of life. A crucial factor for achieving this goal is to provide reliable and fast connectivity to these communities, which can have multiple benefits for both the residents and the mining operations. For example, a study in Cornwall, southwestern England, found that installing fiber optic internet in rural villages generated a Social Return on Investment of GBP 2413 per user, by enhancing social inclusion, access to services, and economic opportunities. Furthermore, improved connectivity can also enable remote communities to benefit from the latest innovations in industrial automation and cloud computing, which can increase the efficiency and safety of mining operations.

Enhancing the mobility and connectivity of rural communities is a key strategy to boost their quality of life. Mining projects depend on efficient and reliable logistics throughout their stages of development and operation. Transport links not only facilitate the delivery of equipment and materials, but also the social and economic integration of rural residents with the rest of the region and beyond. Therefore, it is essential to invest in high-quality infrastructure that enables both road and air travel.

Once operational, the benefits provided by BC's mining activities should be distributed more broadly not only to enhance the well being of the local communities, but also to enhance the province's mining adjacent sectors (e.g. recycling of rare earth minerals or funding certifying bodies). This can be analogous to Norway's Sovereign Wealth Fund where the funds from the oil and gas industry have been utilised to benefit the entire country.

Internet connectivity and transport links will support attraction of talent. Funding in research will also provide additional incentives for the best talent to remain in BC. However, the rural mining communities will also require labour forces comprising of trades workers as well as professionals such as engineers, environmental scientists, geoscientists, and health care practitioners. By creating incentives such as tuition reduction for trades programs and partnering of trades institutes with local mines for internships and co-op programs, the province can further enforce a talent supply for these communities. Immigration can also play a major role in providing this labour force. The province can for example partner with Engineers and Geoscientists of BC and College of Physicians and Surgeons of BC to create a method by which credentials from non-Canadian universities and colleges can be verified or tested in an accelerated manner. This can help ensure supply and an accelerated integration of skilled immigrants into the communities created through these mining operations.

Future development in BC must be inclusive and equitable for all, especially for the First Nations who have been historically marginalised. The current government has shown its commitment to First Nations partnership by initiating the B.C. Cabinet & First Nations Leaders' Gathering and passing legislation that recognizes First Nations as equal partners in emergency management. This approach should also apply to mineral development. BC has an opportunity to become a leader in First Nations policy by addressing the past wrongs and ensuring the future benefits of all British Columbians.

BC can also be a leader in this area by upholding traceability requirements of its extractions in order to provide the public, private, and governing bodies with a transparent record of its supply chain sources and labour practices, which is a challenge in the current global extractions supply chain. BC can also employ requirements on transparency of environmental impact by utilising sustainability and carbon footprint models which take the full life cycle impact of the mining operation into account. This is the opportunity for BC to position itself as a global leader in transparency to meet the moment of global but particularly western nations implementing more rigorous supply chain verification requirements.

As Canadian citizens and expats who consider BC our home and want to be part of its future, we hope this letter provides considerations for our ministers and governing bodies in further enhancing BC's strategy in its plan to be a leader in the clean energy sector.

Sincerely,

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