

Written Submission for the Pre-Budget Consultations in
Advance of the Upcoming Federal Budget
by E3 Metals Corp.

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Recommendation 1: That the government establish a new funding program to support and advance projects directly aligned with the Minister of Natural Resources' mandate on Critical Minerals and to position Canada as a global leader in this nascent industry.

Recommendation 2: That the government assign funding mandates to existing government organizations (ex. NRCan, NRC-IRAP, SIF and WD) to advance and commercialize critical minerals projects and related technologies.

Recommendation 3: That the government allocate funding and incentives to expand Alberta's natural resources industry towards diversified activities, such as the lithium industry, that require the same infrastructure and skills as oil and gas.

Recommendation 4: That the government specify a portion of funds allocated to Alberta's Federally funded Site Rehabilitation Program be devoted to the circular economy, converting inactive sites to accelerated beneficial new uses (ex. lithium, geothermal, solar).

Introduction

E3 Metals Corp. appreciates the opportunity to participate in the Standing Committee on Finance's pre-budget consultation process. The recommendations we set forth below focus on developing Canada's lithium market, in line with the government's Critical Minerals strategy. This supports critical minerals industries across the country the clean economic transition in Western Canada, as part of Canada's economic recovery from the COVID-19 Pandemic.

About E3 Metals Corp.

E3 Metals is a lithium development company with 6.7 million tonnes lithium carbonate equivalent (LCE) inferred mineral resources¹ in Alberta. As the lightest metal with a high energy density, lithium is a critical component of the multitude of lithium ion batteries today that support clean technology in electric mobility, energy storage and electronics.

E3 Metals is currently advancing its proprietary Ion Exchange Direct Lithium Extraction (DLE) process to unlock Alberta's vast lithium resources. E3's initial planned production scenario of 20,000 tonnes LCE/year represents 2% of the forecasted lithium market in 2025, creating hundreds of jobs and a quarter billion in revenue from a single project. These benefits will amplify as the industry grows.

E3 has already attracted USD 5.5M in foreign direct investment from Livent, the world's largest pure-play lithium producer, well-known for being one of the lowest cost producers of lithium carbonate. With facilities across the globe, Livent holds technical expertise in the extraction and production of various lithium products. E3 Metals also continues to work with partners at the University of Alberta and at GreenCentre Canada.

Through the successful scale up its DLE process towards commercialization, E3 Metals plans to quickly move towards the production of high purity, battery grade, net-zero GHG lithium products as early as 2024. With a significant lithium resource and innovative technology solutions, E3 Metals has the potential to deliver sustainable lithium to domestic and global markets from Canada -- one of the best jurisdictions in the world. The development of this lithium resource through brine production is a well-understood venture in Alberta, where this brine is currently being produced to surface through an extensive existing oil and gas infrastructure and development.

Recommendation 1:

That government establish a new funding program to support and advance projects directly aligned with the Minister of Natural Resources' mandate on Critical Minerals and to position Canada as a global leader in this nascent industry.

Through the mandates of the Minister of Natural Resources, the Minister of Environment and Climate Change, and the Minister of Innovation, Science and Industry, Canada has committed to developing a critical minerals industry and to position Canada as a global leader in clean technology. Amid the growing demand for lithium products globally (Figure 1), Canada has a major opportunity to become a large supplier of low-carbon lithium to emerging supply chains in the Americas.

Lithium is critical to the construction of Battery Electric Vehicles (BEV) due to its light weight and energy density. China and Europe have already committed to BEVs, while hundreds of new models are expected to be released in the near future by a wide range of global automobile manufacturers. A staggering number of new lithium-hungry Gigafactories are under development globally to meet this need.

Though the development of known lithium resources (Alberta, Quebec), Canada lithium could enter the market strategically as early as 2024, at a time that demand is anticipated to begin outstripping operational supply. This would establish Canada as a leader in the global EV supply chain, providing the world with a critical mineral that is essential for sustainable mobility. To achieve this, the industry requires support today in the form of non-dilutive funding to match interest and commitments from foreign direct investment¹, similar to what has been committed in the US².

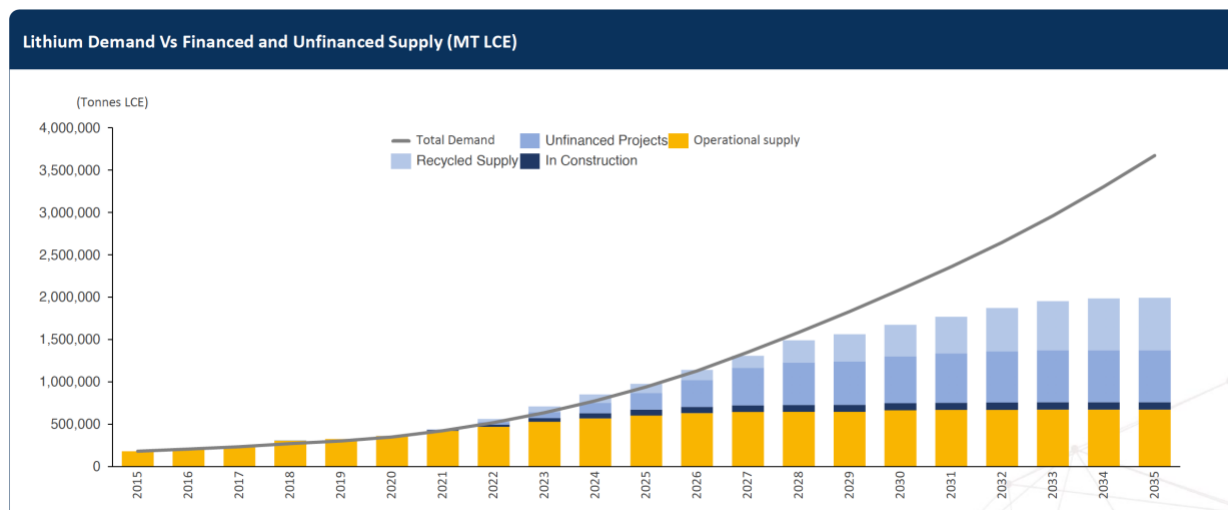


Figure 1: Supply-demand prediction for lithium compounds (Benchmark Mineral Intelligence, 2020)

Recommendation 2:

That the government assigns funding mandates to existing government funding organizations (ex. NRCan, NRC-IRAP, SIF and WD) to advance and commercialize critical minerals projects and related technologies.

With no existing lithium production today, Canada's developers have a unique opportunity to set the bar high at the onset of production to produce sustainable raw materials with low emissions intensity to support the low carbon economy. Many early stage grant funds (TRLs 2-8) have mandates specific to clean technologies reducing greenhouse gas emissions with reduced priority towards emissions mitigation or abatement on a new project. We recommend that mandates across the funding ecosystem be broadened to include raw materials production associated with supporting the federal government's critical minerals mandate.

Eleven percent of the Canadian GDP is associated with the extraction of raw materials³, including the battery metals sector, which is an enabler of Canada's GHG reduction goals. Supporting creative solutions for new raw materials production methods allows Canada to remain within its wheelhouse while achieving its carbon reduction goals (ex. lithium production with carbon capture, producing near zero-carbon lithium).

¹ <https://magazine.cim.org/en/news/2019/e3-metals-secures-funding-for-alberta-petro-lithium-pilot-plant-en/>

² <https://www.energy.gov/articles/departement-energy-announces-30-million-innovation-critical-materials-processing>

³ <https://www150.statcan.gc.ca/n1/daily-quotidien/190626/dq190626a-eng.htm>

Recommendation 3:

That the government allocate funding and incentives to expand Alberta's natural resources industry towards diversified activities, such as the lithium industry, that require the same infrastructure and skills as oil and gas.

Demand for oil and gas is expected to remain strong for decades. Recently major price fluctuations in the oil and gas industry have demonstrated the fragility of the petroleum market. Canada's focus on the reduction of GHGs is anticipated to also result in a slow decline on the domestic demand for oil⁴.

Alberta has a unique opportunity today to go beyond oil and gas development and capitalize on growing demand for lithium as well. This is a commodity with a growing market, with anticipated electric vehicle market share eclipsing internal combustion engines by 2035 (Figure 2). Importantly, Alberta's capacity to meet demand in this market will rely heavily on the existing and sophisticated technologies, infrastructure and skill sets developed through oil and gas.

Nascent industries, such as the lithium industry in Alberta, take time to establish and require support early on to produce jobs and GDP in line with Canada's other natural resources industries. An example of government-lead industry development is the Alberta Oil Sands Technology Research Authority (AOSTRA) and its support of SAGD technology, which unlocked an entirely new resource in Alberta. Supporting technology development to produce lithium in Alberta could have an even bigger impact economically than SAGD once did.

We recommend the mandated implementation and support of provincial incentive programs, such as those offered in Saskatchewan^{5 6}, that offer transferrable royalty credits for piloting new technologies on existing oil and gas operations. One of these programs has already resulted in the advancement of a lithium production pilot in Saskatchewan⁷ in an area traditionally known for oil and gas production. Alternatives to the transferrable royalty credits include transferrable tax credits for partner operators.

⁴ <https://www.cer-rec.gc.ca/nrg/ntgrtd/fttr/2019/rslts/index-eng.html>

⁵ <https://www.saskatchewan.ca/business/agriculture-natural-resources-and-industry/oil-and-gas/oil-and-gas-incentives-crown-royalties-and-taxes/saskatchewan-petroleum-innovation-incentive>

⁶ <https://www.saskatchewan.ca/business/agriculture-natural-resources-and-industry/oil-and-gas/oil-and-gas-incentives-crown-royalties-and-taxes/oil-and-gas-processing-investment-incentive>

⁷ <https://www.saskatchewan.ca/government/news-and-media/2020/june/03/lithium-production>

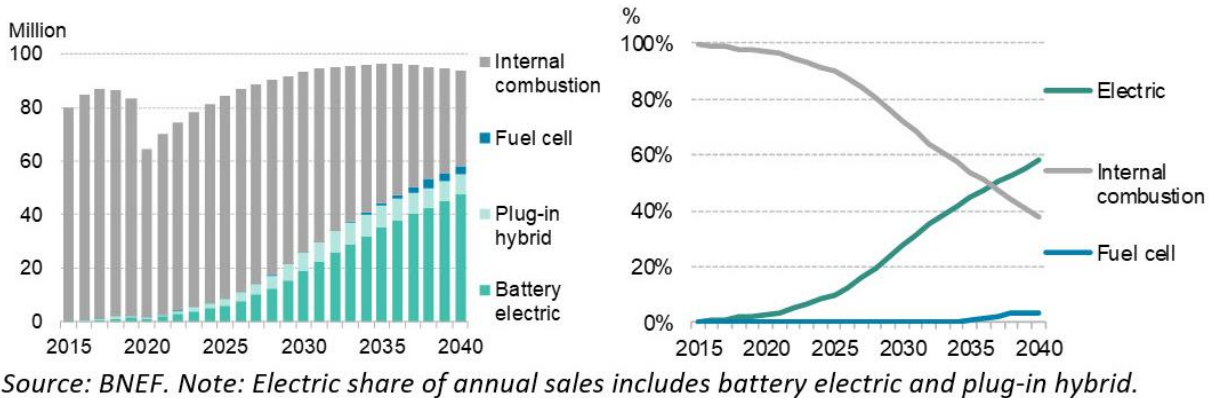


Figure 2: Left – Global annual passenger vehicle sales by drivetrain. Right – Global share of total annual passenger vehicle sales by drivetrain (BNEF, 2020)⁸

Recommendation 4:

That the government specify a portion of funds allocated to Alberta's Federally funded Site Rehabilitation Program be devoted to the circular economy, converting inactive sites to accelerated beneficial new uses (ex. lithium, geothermal, solar).

Alberta received \$1B of funding from the Federal Government that has been allocated to the Site Rehabilitation Program for cleaning up inactive, abandoned and orphaned sites. Most of these funds to date have been devoted to returning sites to their original state. However, some sites are suitable for redevelopment after minor cleanup and instead of being reclaimed, can be converted to accelerated beneficial new uses such as lithium testing and development.

Keeping existing sites in use preserves the value of the site in the form of the energy, labour and materials that went into building it, avoiding disturbance that would otherwise be required for new development. By mandating the Alberta provincial government to allocate a minimum of 5% of the funds to accelerated beneficial new use of sites, Alberta can start to realize the asset potential within the context of its current liability challenge. These funds have already been allocated and would require no new government spending on top of what has already been committed.

Conclusion

E3 Metals Corp. appreciates the Standing Committee on Finance's consideration of our pre-budget consultation submission. We know that the recommendations we set forth above will support Canada's clean economic recovery from the COVID-19 pandemic, and position our national critical minerals industry for both short-term recovery and long-term success. We would be pleased to provide additional information on our company or the recommendations above to any Members of the Committee upon request.

⁸ <https://about.bnef.com/blog/electric-vehicle-sales-to-fall-18-in-2020-but-long-term-prospects-remain-undimmed/>