HOUSE OF COMMONS
CHAMBRE DES COMMUNES
CANADA

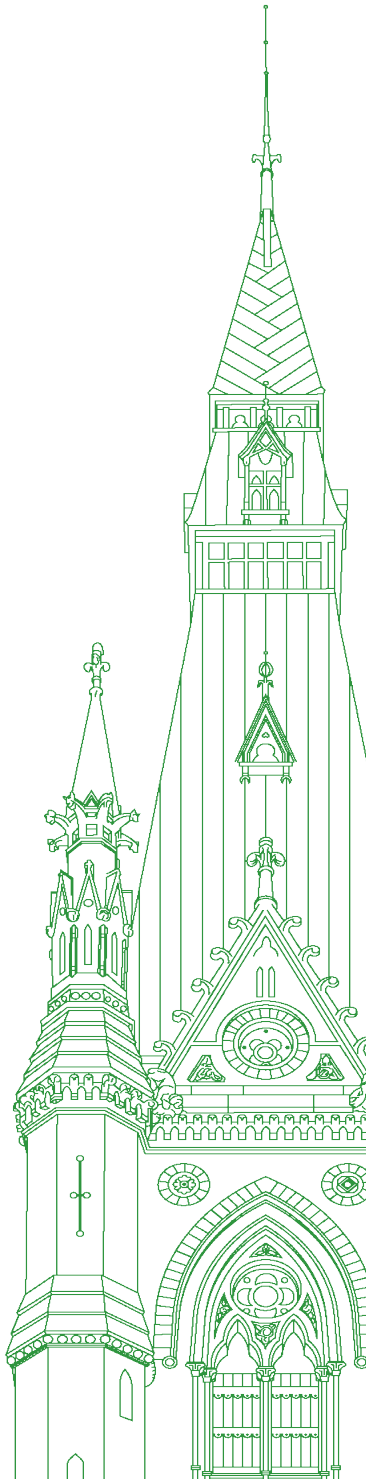
43rd PARLIAMENT, 2nd SESSION

Standing Committee on Natural Resources

EVIDENCE

NUMBER 013

Monday, February 22, 2021



Chair: Mr. James Maloney

Standing Committee on Natural Resources

Monday, February 22, 2021

● (1105)

[*English*]

The Chair (Mr. James Maloney (Etobicoke—Lakeshore, Lib.)): I call to order meeting number 13 of the Standing Committee on Natural Resources.

I'll start by saying I appreciate Mr. Lloyd's enthusiasm. I can assure you that it's shared amongst all members of this committee regardless of what province we're from.

To our witnesses, thank you for coming. I'm going to do some formal introductions of you and the process in a moment, but if you don't mind bearing with me and the committee for a few minutes, we have some outstanding matters from our last meeting that I would like to deal with.

Members, I'm referring to Mr. McLean's motion and Mr. Simard's proposed amendment, and Mr. Lloyd's objection to the amendment.

On Friday, as everybody will recall, we postponed this issue to be dealt with this morning because we didn't have the documents in front of us and there were some issues with respect to translation. By now, everybody should have received a copy of Mr. Simard's proposed amendment in both official languages. Hopefully, you have that in front of you.

I've had a look at it. I've had a further look at Mr. McLean's motion. I've given consideration to Mr. Lloyd's objection. I've had a look at rules of procedure.

Mr. Lloyd, I'm going to rule that the proposed amendment is acceptable and appropriate.

That being the case, barring any objection to that, what I propose to do is continue our debate on the amendment. Then, once we have disposed of the amendment by way of vote, we can continue our debate and discussion on Mr. McLean's motion either as amended or as it currently stands. That's my plan.

Mr. Lloyd, I see you have your hand up, as does Mr. McLean.

Mr. Dane Lloyd (Sturgeon River—Parkland, CPC): I will defer to Mr. McLean, but I'd like to have an opportunity to respond right after him.

The Chair: Go ahead, Mr. McLean.

Mr. Greg McLean (Calgary Centre, CPC): Mr. Chair, I wonder if this would be better dealt with if we set aside 15 minutes at the end of the meeting for this matter: hear the witnesses for an hour and three-quarters and then deal with this at the end.

Would that be a more appropriate way to get through our agenda today, as long as it's clearly defined?

The Chair: Yes, Mr. McLean. Thank you for that. I'm more than happy to proceed in that fashion. I just didn't want you or any of your colleagues to think I had decided not to deal with the issue as I had committed to doing on Friday. Thank you for proposing that.

Assuming there are no objections from any of the members, we can jump into the meeting. I see none. I see thumbs-up and heads nodding. That's good.

To our witnesses, welcome and thank you. This is our second meeting on a very important study dealing with critical minerals and supply chains in Canada, and we are very grateful for your taking the time to be here today.

In terms of some of the rules of the road, we are conducting this meeting by Zoom, which unfortunately carries with it some challenges. What I ask is for people to wait until others have finished speaking before taking their turn to speak, so that the interpreters and members can clearly understand everything that's being said.

The process will be that each group will be given up to five minutes to make an oral presentation, following which the floor will be open to questions from the members. You are welcome and encouraged to speak in either official language. You have headsets provided for you. On your screen, you should see a little symbol at the bottom that provides for translation. If you are having any troubles in that regard, please speak up and let me know and we will take steps to rectify it.

As I said, you have five minutes each. I welcome all our witnesses.

We have Avalon Advanced Materials Inc., the Battery Metals Association of Canada, Benchmark Mineral Intelligence, Eagle Graphite Corporation and the Yukon Chamber of Mines.

Madam Clerk, do we have everybody present now?

The Clerk of the Committee (Ms. Hilary Jane Powell): We are still waiting for our last witness, the Yukon Chamber of Mines, so I will monitor when Mr. Hartland joins. We might need to do a quick test with him, depending on how his headset is, but in the meantime, as he is last on the list, we can proceed.

The Chair: Thank you. Perhaps you can give me a little nudge when he arrives and we can deal with it at the time.

Let's get started with Mr. Bubar from Avalon Advanced Materials.

Sir, you have the floor for up to five minutes.

I should forewarn everybody that, as unpleasant as it is, one of my jobs is the chief interrupter. If people are going beyond the time allocated, I have to stop you. Sometimes that occurs in mid-sentence. I try to avoid it, but try to be conscious of the time. Thank you.

Go ahead, sir.

Mr. Donald Bubar (President and Chief Executive Officer, Avalon Advanced Materials Inc.): Thank you very much for the invitation to be a witness here today.

I'll give you a little bit of my background information. I'm a geologist. I've been involved in mineral exploration and development in northern Canada for 45 years now. For the last 26 years, I've been president and CEO of Avalon. For most of those years, we have been looking at opportunities to start these critical minerals supply chains in Canada—notably, lithium, rare earths, cesium, tantalum, tin, indium and others. It's been very challenging. It's not simple getting these non-traditional commodities started into production, but now there is certainly interest, and we're delighted to see that new opportunity is there.

One opportunity I'm particularly excited about is that this will create enormous new economic development opportunities for indigenous businesses and communities in the north. I have been an advocate for this for many, many years. Some of you who read The Globe and Mail may have seen that I got an opinion piece published two weeks ago in the report on business. It was co-authored by my good friend and former national chief Phil Fontaine. We pointed out how these new critical minerals supply chains offer a tremendous opportunity for active involvement by indigenous communities in the north in building these new supply chains.

I'm keen to be able to create some positive examples of that myself. With our lithium project, we're now at the stage of trying to get a lithium process refinery to make the battery material products from the mineral concentrates that are your feedstock at a location in Thunder Bay, Ontario. We think it's ideal because of its location with respect to existing transportation infrastructure and the proximity to new markets emerging in eastern Canada.

Part of the dialogue there is that there's lots of interest in Thunder Bay in having that facility there, including with the Fort William First Nation. They are keen to partner with us, to work with us on getting this refinery established on their land and at the same time create many new opportunities for other first nations to begin to create the supply of lithium minerals as feed for that refinery going forward. That will allow us to increase production over time, because we know that there will be an increase in demand over time. That's our vision for getting that supply chain started in that sector.

The other thing I would like to mention briefly is that there are many other circumstances where you can look at trying to recover these critical minerals from unconventional situations. You're going to hear about one from E3 Metals later, I guess, on the recovery of lithium from the oil field brines in Alberta. Another very unappreciated opportunity is going back to historic mine wastes that are closed mine sites. They were developed decades ago to produce a traditional exchange-traded commodity, but the resource may have had many other elements in it that had no value or interest decades ago *[Technical difficulty—Editor]*. Many of these sites now offer opportunities to go back and create a new plan, reprocess the tailings that track critical minerals, and fully remediate the long-term environmental liability while you do it.

There are lots of opportunities, including some for lithium. We had a project in southwestern Nova Scotia, a past-producing tin mine called East Kemptville. Tin mines are not just tin deposits. There's lot of stuff in them, including lithium, tin, indium, gallium and germanium. Lots of potentially important critical minerals are there in the wastes and the tailings. There are new opportunities to recover them and remediate the site, but it's never easy to do. There are always issues in terms of access and managing the liabilities from the historically poor understanding of what sort of opportunities are available there now.

● (1110)

Plus, there are a lot of innovative new technologies being created now to allow for more efficient extraction processes that just don't generate the waste that traditional mining operations used to.

All of those things are possible, and I would love to be able to get some of these situations started, create a positive precedent and show the rest of the world how we can provide real leadership on recovering these critical minerals in these non-traditional circumstances. Plus, I'm looking at one for rare earth.

In northern Ontario, we just disclosed last week a really interesting opportunity to get the rare earth supply chain started quickly and easily, just by processing historic mine waste.

The Chair: Thank you, Mr. Bubar.

I'm going to have to stop you there, but I appreciate your presentation. Any time anybody mentions Thunder Bay, my ears perk up because I was actually born in Thunder Bay, and Mr. Weiler, who is a member of this committee, has ancestors who hailed from Thunder Bay. In fact, my birth certificate actually says Fort William, which is more a reflection of my age than anything.

Let's move on to the Battery Metals Association of Canada.

Ms. Lappin, you have five minutes.

Ms. Liz Lappin (President, Battery Metals Association of Canada): Good morning. My name is Liz Lappin, and I am the president of the Battery Metals Association of Canada, or BMAC for short. In addition to BMAC, I also work for E3 Metals Corp., just recently mentioned by Mr. Bubar. We're working to develop a first-of-its-kind lithium project in Alberta. Thank you for the opportunity to present today.

Development of the battery metals sector, from mines to mobility, is essential to support the continued expansion and adoption of clean tech as the world transitions to a low-carbon future. Relative to the EU and Asia, the Canadian battery metals supply chains are currently in their infancy. However, with surging demand for battery metals to feed the expanding EV supply chain, the market opportunity for Canada is growing.

BMAC was formed to help develop the united industry voice. Through a collaborative approach, we're working to connect, align and advance the industry so that it can meet its full potential for Canada. Our community is predominantly based in western Canada; however, our vision is pan-Canadian.

This brief is divided into three sections that outline recommendations for the sector.

The first area of focus is support for critical minerals project development. The World Bank and a host of forecasters anticipate greatly increased global demand for critical minerals in the years ahead. While Canada has an abundance of resources, they have been slow to develop due to a variety of challenges. Examples include high volatility in emerging pricing, competition for capital against established critical minerals jurisdictions, the highly complex nature of battery metals production, and delays in regulatory and policy development. Canada needs to move swiftly to support the needs of its domestic economy.

To support critical minerals development, BMAC recommends financial support for qualified domestic battery metals companies that are capable of demonstrating viable prospective projects; promoting exploration and identification of resources by amending the Income Tax Act to ensure that lithium brine resources are eligible for flow-through shares; encouraging provinces to rapidly develop responsible yet industry-friendly mineral policy and regulations to accelerate critical mineral resource development; and promoting streamlined tenure and regulatory frameworks to incentivize responsible development. Finally, we recommend prioritizing innovation funding for industry cluster applications, which would incent Canadian collaborations and strengthen connections along the supply chain.

Our second area of focus is investing in value-added manufacturing. To avoid simply being an exporter of raw materials, Canada needs to further develop its domestic value-added industries across the country. Developing a complete, made-in-Canada, end-to-end, coast-to-coast supply chain is key to ensuring that Canadians have access to the resources and products they need, including batteries for electric vehicles and energy storage. To do this, we recommend prioritizing investment in the battery component and cell manufacturing sector as part of Canada's “build back better” strategy, developing policy and financial incentives to support Canadian industry and government to buy local, and, finally, harnessing the purchasing power of government, public institutions and publicly owned businesses to provide scale.

Our third and final focus area is developing a cohesive strategy. To borrow an analogy from the arts, it is commonly said that in order to play a symphony, you need an orchestra. Today what I hear are a variety of notes of music or even sometimes a few lines of music strung together. If the entire orchestra—including government, industry, academia and stakeholders—can all get organized behind a conductor, or essentially an overarching strategy, we could play some pretty incredible music. A symphony, like art, can be transformational, and a successful build-out of this industry in Canada can also be transformational, but only if we can all get behind that strategy, acting as a system rather than as individual actors or musicians just playing our own parts.

Canada is on the cusp of a rare, once-in-a-generation opportunity to develop its critical mineral industry and compete in this major new market. The global pandemic, in particular, has laid bare the shortcomings in Canada's ability to produce critical goods needed for our country. We do not wish to face similar circumstances in the resources, components or products that will deliver a greener future to Canadians. While it's true that Canada has fallen behind in this respect, it can still catch up, particularly as the sector continues to evolve to meet Canada's own needs.

BMAC believes that by acting swiftly, together, efficiently and responsibly, we will realize the abundant opportunities before us.

Thank you.

● (1115)

The Chair: Thank you very much—right on time, too.

Before we move on to Mr. Moores from Benchmark Mineral Intelligence, I understand that Mr. Hartland has arrived, so perhaps we could do a quick sound check, and I could explain to Mr. Hartland what we're doing.

Sir, I'm assuming you can hear me. Each witness group that's here today is given up to five minutes to present. When all the groups are done, we're going to open the floor to questions. We've started, and have heard from two witnesses so far. There will be two more, and then we'll reach you.

Perhaps the clerk can do a quick sound check with you before we carry on.

● (1120)

The Clerk: Certainly.

Mr. Hartland, if I could ask you to say a sentence or two, we want to make sure that our interpreters are able to hear you.

Thank you very much.

Mr. Samson Hartland (Executive Director, Yukon Chamber of Mines): Good morning, everybody.

I am Samson Hartland, the executive director of the Yukon Chamber of Mines. Apologies for the late appearance.

The Clerk: Perfect, thank you very much.

The Chair: Thank you, Madam Clerk.

We'll move on to Simon Moores, from Benchmark Mineral Intelligence.

Mr. Moores, you have the floor.

Mr. Simon Moores (Managing Director, Benchmark Mineral Intelligence): Good morning and good afternoon from London, U.K.

We are in the midst of a global battery arms race, where the world's major economies are building a base to the energy storage revolution. The lithium-ion battery is the platform technology to unlocking the vast potential that energy storage holds for our world through electric vehicles and stationary storage systems. This race to build global battery capacity has seen a number of megafactories or gigafactories in the pipeline go from three in 2015, to 192 today.

China and Europe have led this charge, but North America is just beginning its journey. The importance of these battery megafactories cannot be underestimated. They not only provide the necessary lithium-ion battery cells at scale and low cost to tap into this mega trend, but these supersized battery plants are becoming physical embodiments of a country's industrial and technological ambition.

Due to significant investments made today, by 2030, China and Europe will hold the sway of this industrial power, accounting for 67% and 18% of the world's battery capacity, respectively. North America will presently hold just 12%, a fraction of what it needs today, and a number that's at odds with its global energy and automated position.

Access to low-cost lithium-ion batteries will be one of the factors in determining which economies come out on top in the race to decarbonize the world. However, this is not just a battery game, but one of supply chain dominance. As it's known to all of our Canadian customers and friends, this begins in the ground at mine level.

While 25% of the cost of an electric vehicle is the lithium-ion battery, 80% of the cost of the battery is the minerals, metals and chemicals that go into it. In the end, a fundamental limiting factor is access to quality raw materials and chemicals at a stable long-term price. While the world's governments and automakers focus on building EVs and battery plants, a true leader has yet to emerge in building the supply chains to feed them. At Benchmark, we call this the great material disconnect between those making the EVs and the miners and chemists building the specialty materials to go into them.

Canada is a country built on understanding the importance of these supply chains. Your country has some of the richest resources of EV minerals and metals, such as lithium, nickel, cobalt, graphite, manganese, copper and rare earths. Just as importantly, you have the people, the know-how, and the technology to be able to access these resources in a responsible and economic way. As a result, Canada holds the potential to create the upstream blueprint for this global energy storage revolution.

While the world looks one way to build EVs and battery cells, Canada should look the other way, upstream, to not only ensure the basic supply of raw materials for this revolution, but add the value, make the chemicals, the anodes, the cathodes, even maybe 100% Canadian lithium-ion batteries from mine to sale.

This has been China's approach. China has built dominance in the supply chain from more than a decade of investments. Despite the common misnomer, only 23% of all battery raw materials are mined in China, but 80% of battery chemicals are refined there. Having huge midstream capacity ensures these key raw materials flow into China to be value-added. It also translates into creating trillions of dollars of value in downstream industries.

This is a game of raw material musical chairs, and with no country willing yet to take a leadership position, the music will stop and with it, the electric cars and the energy storage systems needed to decarbonize the world will grind to a halt.

Canada holds the ingredients to solve this problem. To make this happen, Canada needs to align policy, legislation and funding at both the federal and provincial levels.

The European Union recently invested three billion euros into the battery supply chain, which will spark three times the amount of private investment. The United States, investing $20 billion into the semiconductor supply chain last year, is also an apt example. The world's major economies are rapidly realizing that their economic security is national security, and that the lithium-ion battery supply chain is the battleground.

I would like to thank the committee, Chairman James Maloney and Vice-Chair Greg McLean for inviting me to speak on this subject.

Thank you.

● (1125)

The Chair: You are very welcome. We thank you.

Mr. Deith, the floor is yours, sir.

Mr. Jamie Deith (Chief Executive Officer, Eagle Graphite Corporation): Thank you. I deeply appreciate your inviting me to share some thoughts.

When I accidentally bought a graphite mine 15 years ago, I had no idea just how lucky I was to have stumbled on our project. Here was a graphite quarry that was already built and permitted and had already produced graphite.

The project was and is an environmental dream, with no acid contamination to worry about, and not even any tailings, because there is a market for all the material that isn't graphite. It has hydroelectric power for processing, and it's amenable to becoming an all-electric operation once haul vehicle technology advances far enough. The graphite itself is indispensable for a number of clean energy technologies, and it is the carbon that reduces carbon footprint.

The project enjoys overwhelming community support, including support expressed by all political parties, provincial and federal. It is staffed by loyal and talented people who became experts by actually making graphite, producing some of the highest-quality graphite in the world and doing so on an unbelievably low budget. Before long, we successfully qualified as a supplier to some key customers, and all we had to do was scale up production capacity to meet their orders.

On reflection, we had stumbled into no ordinary project, but one whose features are globally unique. Compared to all my peers who had also unintentionally purchased their own graphite mines, I was clearly the most fortunate of the bunch.

However, I had no clue just how much pain we were in for in trying to further develop this project.

Natural graphite is the poster child for minerals dominated by China and, in the face of a near monopoly wielded by one of the most powerful governments in the world, no combination of attributes could convince prospective sources of capital to invest in required expansion. Supply chains around the world seemed mostly content with heavy reliance on a single nation.

In the extreme case of natural graphite for lithium-ion batteries, fully 100% of the intermediate-stage processing was taking place in China, and still is. This positioning is intentional. China has been investing in electric vehicles since at least 2009 and openly seeks global dominance in the sector.

Meanwhile, project financing circles generally approached green energy as an afterthought and viewed traditional fossil fuel projects as safer long-term bets.

However, as noted by a number of your earlier witnesses, viewpoints have recently shifted rapidly and decisively. With GM and Ford the latest to fully commit to EVs, the green energy debate is seemingly over, at least as far as transportation is concerned; the question is not if but when the last fossil fuel car will roll off the line.

At the same time, there is a renewed sense of urgency for secure, localized and diversified supply chains across all industries, but especially those critical to defence and otherwise foundational to the economy. It has finally dawned on us and our allies collectively that some parts of the economy need a reliable underpinning of steady supply.

Now that this tipping point has arrived, Canada has a choice of roles. We can choose to be base-level raw material suppliers. The minerals involved are poised for exponential demand growth, and projects like my own seem likely to be slammed with more customers than we can handle. In our case, this would mean selling our natural graphite for about $1 per kilogram, based on current markets. If my hunch is correct, our economic friends and adversaries alike will gladly take all that we have to offer for that one dollar. Standing today, this is the limit of Canada's capabilities.

Canada's other alternative is for us to invest heavily and with urgency in downstream manufacturing, nurturing a viable ecosystem of second- and third-stage processing capability, where currently there is a vacuum. For graphite, this means processing that one-dollar output into advanced products like battery anodes, valued at over $5 per kilogram.

Most of us would prefer the latter role, but achieving it requires significantly increased commitment from all of us. Half measures will not buy us half an ecosystem. There are many good ideas as to the form these commitments might take, and I'm happy to be involved in that discussion, but there simply isn't enough time to list all the possibilities now.

In any event, whatever we do must be bold and so compelling that end-users and investors alike will find the effort credible enough that they will queue up to buy in. This is how we go from where we are now to a thriving ecosystem, and if we achieve this, it won't be just a happy accident.

● (1130)

Thank you, and I look forward to your questions.

The Chair: Thank you, Mr. Deith.

Last to hear from is Mr. Hartland.

Mr. Hartland, you have the floor for five minutes.

Mr. Samson Hartland: Good morning, everybody. Thank you for the opportunity to be able to present this morning, and thank you, members, for making the time for such an important topic.

Here in the Yukon I represent the Yukon Chamber of Mines. We represent a membership of over 700 members, representing every facet of Yukon's mineral development industry. We have some of the best geology in the world in mineral occurrences, and have been quite well renowned for that ever since the Klondike Gold Rush. However, now, 100 years later, we know that the transformation and the need for our minerals are very different today than they were in yesteryear. We have some of the best geology, as mentioned, and with that in the critical minerals area we have active exploration projects related to nickel, cobalt and the platinum group of metals.

I won't spend too much time talking about our potential. I think that's the reason we're here today, and people are very familiar with our place in the world global commodities market. I think what I would spend a little bit of time on, and speak to, is what some of the challenges or barriers might be to getting to some of those critical minerals that are so highly sought after and strategically important to the people online today.

We know that one of the challenges preventing us from getting to some of these minerals is the fact that they're land-locked. Some of those investments announced by the federal government three years ago related to the Yukon resource gateway project. It has seen very little spent to date in the way of being able to develop Yukon's highway and road network to enable access to key minerals and strategically get into the Tintina Belt, which would obviously unlock strategically a significant amount of minerals.

Energy production is another significant barrier at this time. Yukon energy is 99% renewable, so we have some of the cleanest energy produced in the world. However, there's only a finite amount of it. Right now we're at capacity, and there are issues related to trying to get us connected to the B.C. grid. It is something that was presented as per our pre-budget consultations. Connecting to the B.C. grid would be transformative for our industry and for our territory, both in the way of developing projects, but also developing communities.

There's a very symbiotic relationship between the minerals in the ground and the people above it who are considered the caretakers of the land, and that's Yukon first nations. Another key component to accessing the critical minerals that exist in the great geological occurrences in the Yukon is an early, effective and meaningful engagement with Yukon first nations. There's a lot of discussion around what the permitting and regulatory regimes look like, and we're currently in the development of a mineral development strategy, which we hope will bring in renewed mineral development legislation that clarifies and incorporates some of the key tenets that are important to Yukon first nations, but also to industry in the way of corporate and social responsibility.

I'll leave my comments at that, and leave it open to questions. I know there will probably be some more pointed questions about the Yukon's position and being able to supply some of these critical minerals, and I look forward to being able to answer those.

Thank you, Mr. Chair.

The Chair: Thank you, Mr. Hartland.

I don't ever get to say this, but we had five witnesses and all stayed within time, so I didn't have to interrupt. I take great pleasure in that, to let you know.

We'll start our questions now.

Mr. McLean, you have the floor for six minutes.

Mr. Greg McLean: Thank you, Mr. Chair, and thank you to all the witnesses for coming today and giving us such good presentations on this sector and where we need to go with this sector.

I'll start my questions with Benchmark Minerals, please, and Simon Moores. Mr. Moores, you talked about the costs of the batteries. We talk about 80% of the costs being from the actual supply of the raw materials themselves. Can you talk a little about the supply and demand of those raw materials as we move into more of a battery-intensive transportation network going forward, that is, the relationship to price and the relationship it's going to have on the actual cost of battery storage?

● (1135)

Mr. Simon Moores: Yes, I'd be more than happy to.

The critical materials are the ones that are produced in the hundreds of thousands of tonnes, like lithium, cobalt, graphite, and then subsequent anodes and cathodes after that. They will go through a very stressful 10 years. What I mean by that is that there will be extreme volatility. There will be moments of significant undersupply, and then moments of significant oversupply, and then continuous. We've already experienced that with lithium in the last four years.

What's happening is that the demand for these raw materials is growing at a pace that no one alive has seen. This is an order of magnitude over 10 years that could be anywhere from a four to ten times demand change within that time period, depending on the battery raw material that you're looking for.

I've spoken to the chiefs of big mining companies like Rio Tinto and Anglo American about this and asked them if they had seen it in base commodities that we're more familiar with, but not this great curve and not at this pace.

A good story in my head that I always take away is that it takes four to seven years to build and fund a lithium mine, but it takes 18 months to build a battery plant. So you can instantly see the problem with them and how the supply chain is going to build out, and that leads to the volatility that I mentioned at the start.

Mr. Greg McLean: If we talk about either lithium or cobalt and its pricing today versus its pricing in, let's say, five years, when we'll have, according to optimistic accounts, 10 times as many electric vehicles on the road in North America, tell me what the pricing chart would look like.

Mr. Simon Moores: Pricing is simply a function of supply and demand. It doesn't matter if the market is 10 times the size in the future or if it's the size it is now. Lithium, for example, is going through a period of shortage right now, so the price is going up. In the last four years, when the EV demand increased 30% for lithium, the price was coming down at that time.

What happens when lithium's price stays down, and the same for cobalt? If it stays too low for too long, you just don't get investments in new mines. There's always an incentive price to bring on a new supply. As a result, at the moment, because it's left to the capital markets, you're not getting the money for those new mines, and that's really where there could be a role for the government to play and underpin that.

Mr. Greg McLean: Do you see there being a choke point at some point in the near future?

Mr. Simon Moores: Yes, we're hitting the wall very soon. Lithium's price is going up and cobalt's price is going up. As we speak, this year, I think we're 18 months away, maximum, from hitting the wall of demand growing as we see the automakers.... There's no investment in the raw materials, or if they put the money in the ground now, you'll probably see it in four years' time, so we're about to hit that wall.

You will see the headlines of the next 18 months, and that's just the start.

Mr. Greg McLean: I have another question for you, and I'll have to move quickly here.

You talk about energy security, because of the relation to other countries and their ability to store and provide battery materials here with the supply chains. You know that China has 80% of the actual processing of the materials, even though they only produce some of it.

Can you talk about where those mines are around the world that are actually fuelling China's appetite for this to control this market in the future?

Mr. Simon Moores: Yes, the mines are in places like Canada and places like the DRC, and different countries in Africa and South America.

The way China does it is that it goes in and either owns part of the mine or takes over a company, or it does long-term contracts in supplier states. The one thing China does do is it goes to other countries and puts money into the ground and therefore it guarantees the raw materials for its own economy. That's the state of play at the moment.

Mr. Greg McLean: Thank you.

I have a question for Mr. Deith at Eagle Graphite.

You talked about the inner transition and the importance of graphite, which is fundamental. If you think about where the supply of power is in Canada right now, all kinds of power, how do you see the actual power being used to get into battery vehicles and other areas in the next decade, when we have to replace about two-thirds of Canada's power if we're going to decarbonize the way you've indicated here?

Mr. Jamie Deith: I'll do my best to answer coherently here.

If you're referring to power for the mine sites, graphite, in particular, is no more intensive than any other mining; in fact, it's usually less intensive. Some purification methods require power.

I know in the analysis for our own mine site it's not really considered a barrier to expansion. In fact, I would characterize our constraint as a—

● (1140)

Mr. Greg McLean: Mr. Deith, I'm sorry to interrupt.

I'm asking about where the power will come from to be stored in the batteries that you're producing.

Mr. Jamie Deith: Do you mean for actually charging up the electric vehicles?

Mr. Greg McLean: Correct.

Mr. Jamie Deith: Most analysis I've seen would suggest that the incremental demand to charge vehicles is not going to be an undue strain on the electrical system. The fact of the matter is, the incremental demand will occur over a very long period of time and is a relatively small fraction of the base-level demand that already exists.

I personally don't think it's going to be a limiting factor in the rollout of electric vehicles.

Mr. Greg McLean: Thank you.

The Chair: Thank you, Mr. Deith.

Thank you, Mr. McLean.

Mr. May, you are next, for six minutes.

Mr. Bryan May (Cambridge, Lib.): Thank you very much, Mr. Chair.

First of all, thank you to all of our witnesses for taking the time to join us here today to help us with this study.

They say that timing is everything. I had a meeting this morning with a number of key stakeholders in the automotive industry. It was remarkable how much of that conversation crosses over to this one. They're managing some very interesting challenges right now. As you may know, COVID-19 has had a major impact on auto sales. They're down about 19% from 2020, which is the largest decrease in auto sales since 1984. They're ramping up and things are moving in the right direction now.

The challenge is that because of that downward slope, the producers of batteries and the producers of components like semiconductors shifted hard to things like cellphone technology, gaming systems and things like that. There is now a very significant shortage in the auto industry of some of these pieces.

I was very pleased to hear some of the conversation in the opening statements about that issue in terms of not just taking it out of the ground, but adding value and controlling that supply chain piece.

My first question is for Ms. Lappin.

In terms of the issue of controlling that supply chain, what advantages do you think Canada has that we aren't taking advantage of right now that could help create this? Really, we don't have this supply chain right now. How would you suggest we leverage some of our advantages to help move us in that direction?

Ms. Liz Lappin: Thank you.

One of our biggest advantages, of course, is our abundance of natural resources, our track record in ESG performance and being able to do that responsibly in meeting the needs of the folks above the ground with the minerals below.

In that way, I think it makes sense for us to look at attracting that value-added manufacturing to the locations where those resources are, while of course taking into consideration things like infrastructure.

Speaking from the Alberta perspective, this opportunity has been identified with the critical minerals like lithium, which we do have, and looking at going all the way to battery-grade materials and then potentially that next step into the components and the cells. That just makes sense.

I think we have to prioritize the development of that part of the supply chain domestically, over the export. I think that major lever is in the policy rollout.

Mr. Bryan May: Given that much of that policy is going to be provincially driven, what specifically, from a federal perspective, should we be looking at?

Ms. Liz Lappin: One thing I mentioned in my opening statement was buying local and incentivizing those connections along the supply chain between Canadian companies. I am wondering if there are potential tax incentives or advantages that could be rolled out that would encourage that type of economic activity at the domestic level.

● (1145)

Mr. Bryan May: In your opinion, do you think Canada has what is necessary to create that homegrown supply chain system, or do you think maybe a wider approach—maybe a North American solution including the United States and Mexico—would make more sense for us?

Ms. Liz Lappin: I think it's a combination. We have the new trade agreement, the USMCA. There are potentially side agreements that could be made there that essentially protect Canada from being simply that raw materials producer. I would like to see Canada take advantage of our very strong performance in trade and our access to a wide market, and to also try to import some of the expertise that we don't have. I think it's clear that if we had all that expertise we'd be doing that already.

We do need a bit of help there. Strategic partnerships can support that, but we need to do it in a way that builds capacity in Canada.

Mr. Bryan May: Mr. Moores, you've been nodding vigorously throughout Ms. Lappin's comments. Do you want to add to anything there?

Mr. Simon Moores: I completely agree. This electric vehicle battery supply chain is going to evolve in two ways. You're going to have a base load from a global supply chain that we already have, but then you're going to have a severe competition in three regions: domestically in China, domestically in the EU and North America. You need to have countrywide solutions within those regions to bring together the best of what your continent has, because the challenge is that big: it's scale; it's low cost.

I think the biggest advantage Canada has is.... Where is the value generation in the whole EV supply chain? The biggest leaps in value in terms of percentages are from the mine through to the cathodes and the anodes. It's not really making batteries at scale. It's not at making those EVs yet. That's a different skill set, and that is where in my eyes Canada has a really strong opportunity to then link up with Detroit, where the big automakers are making all the electric vehicles. It's just an idea.

Mr. Bryan May: Is that my time?

The Chair: My apologies, but your time is up.

Mr. Bryan May: Not at all, thank you so much.

The Chair: I see Mr. Bubar had his hand up too, which is unfortunate. Maybe we can get to that a little later.

Mr. Simard, we'll move over to you, sir, for six minutes.

[*Translation*]

Mr. Mario Simard (Jonquière, BQ): Thank you very much, Mr. Chair.

I hope Ms. Lappin can hear me properly and that the interpretation is working. I see that it is.

In your presentation and that of Mr. Moores, I have the impression that you came to similar conclusions, that Europe and Asia are ahead of us when it comes to the valuation of critical metals. In your presentation, you said that development was slow in Canada and that this may be due to the very high initial investment costs.

I know that a strategy has been developed by the Quebec government to support the critical metals sector, but there is currently no such strategy in Canada. Should this Canadian strategy, which will have to be created, include a program to access cash to help develop this sector?

[*English*]

Ms. Liz Lappin: Yes, absolutely. I think in many ways some of the funding that's currently available overlaps with this initiative as well, because a lot of the innovation funding available is centred on clean tech, and that's exactly what this is. This is all about a decarbonization plan for Canada. I think that cash should be made available strategically to folks who have been evaluated and who can essentially have the highest chance of getting to that finish line.

In many ways, because this industry is relatively new for Canada, it's not just a matter of making the raw material, as some of the other witnesses have mentioned. It's actually making something that's a specialty chemical that requires specific expertise. We do need a little extra cash for technology development as well.

[*Translation*]

Mr. Mario Simard: In an earlier response, you said that there was a lack of expertise in Canada. Should this expertise be sought abroad or could it be developed here through research and innovation?

● (1150)

[*English*]

Ms. Liz Lappin: In my opinion, it's a combination. An abundance of work is going on in our academic institutions in Canada. I think we need to be reaching in there. We need to be looking at the National Research Council, but then we also need to be importing expertise from the leaders in the space through strategic partnerships globally.

[*Translation*]

Mr. Mario Simard: I have a question for Mr. Moores.

You mentioned that China and Europe will have 67% of the market by 2030, which is still huge. I'm answering my question by asking you, but I'm asking it anyway. Do you think Canada is significantly behind in critical minerals? How do you think we can close that gap? What are the best ways to do that?

Mr. Simon Moores: Thank you for your question.

[*English*]

The best solutions for me are building active capacity in the midstream of the supply chain and encouraging new minds to then tap into the supply chain. I mean specialty chemical operations, cathodes and anodes operations, and then of course you have the option to sell to the growing lithium-ion battery capacity, either in the U.S. or building your own battery plants in Canada. Then you're developing an ecosystem.

I think what's missing is linking every piece of the supply chain and also bringing in all the university R and D work, which Canada is world-leading on, especially on battery technologies. At the moment, nothing is bringing all this together.

[*Translation*]

Mr. Mario Simard: Mr. Bubar, you raised your hand. Do you have something to add?

[*English*]

Mr. Donald Bubar: Yes, I would, actually. I'll just add to what Simon and Liz were just saying.

This has been one of the key reasons that these supply chains have not yet been established in Canada. There's a lack of downstream processing facilities needed to, first of all, do the piloting work to establish an efficient flow sheet that can make the product that's needed in the market. In most cases, you have to be able to produce trial quantities of the product, show them to your customers and get them to verify that it will meet their required specifications. If it doesn't, it's worth nothing, so you can't just guess at that. You have to basically prove it, and there's been a lack of capacity for doing exactly that in Canada.

Fortunately, it's starting now. Thanks to the Saskatchewan Research Council, we are starting to develop more of that capacity, particularly on the rare earth side, but I think there's still a role the federal government could play here in creating some more of these demonstration-scale pilot facilities for aspiring new producers to get access to in order to be able to prove their processes.

The Chair: You have about 25 seconds, Mr. Simard.

[*Translation*]

Mr. Mario Simard: Several people suggest that the technology used to produce batteries is also polluting. Is there enough technical knowledge today to recover end-of-life batteries?

[*English*]

The Chair: I think maybe they can keep it in mind for the coming session.

We will have to move to Mr. Cannings for six minutes.

Thank you, Mr. Simard.

[*Translation*]

Mr. Mario Simard: Okay.

[*English*]

Mr. Richard Cannings (South Okanagan—West Kootenay, NDP): Thank you, again, to all the witnesses here today. It's been a very interesting conversation so far.

I'm going to start with Mr. Deith, because I've actually been to the Eagle Graphite mine in the beautiful Slocan Valley. I have a little bag of graphite in my workshop downstairs, which I use to smooth things out when needed.

I appreciate your testimony here. I got the sense that you had a lot more to say in terms of what we need to do, the things that Canada could and should be doing. In particular, I think you mentioned that China dominates the market with 100% of.... It's not really the refining of the graphite, because you would supply pure graphite. Is it in the making of the anodes? Is that what China dominates right now?

● (1155)

Mr. Jamie Deith: I'm glad to add you to the list of customers who have qualified our product.

With regard to the processing, there are multiple stages that China dominates. In some particular stages, in the case of graphite for battery anodes, the spheronization and purifying of the graphite prior to its being introduced into anode formulation is 100% dominated by China for all commercial purposes.

This is not a particularly difficult thing to do technically. There are always things you have to overcome with these technical things. Really, China has obtained this by actively boosting its industry. It has done this intentionally. I would suggest that a good first step is to make sure that when we produce the graphite, we do have the capability to do things.

One of the advantages that China has over the rest of us is that it gets to play by a different set of rules. Sometimes those rules are environmental rules and sometimes they have to do with labour and safety. It would be best, in my view, if we and our allies could ensure that there's some level of accountability for those actions, so basically levelling the playing field so that China doesn't translate a lax regulatory structure into a cost advantage at the expense of our own industries. I hope that answers your question.

Mr. Richard Cannings: Yes, I think so.

You indicated at the end of your presentation that you had a number of things you could add to this. I just want to give you that extra time if you want to add any other steps that you think Canada should be taking that would benefit not just you and your company but all other companies in that whole value chain for batteries or the other green technologies that we're talking about here today.

Mr. Jamie Deith: Thank you for that.

My thought overall is that there isn't necessarily one winning recipe, and in many cases, we can take existing programs and probably adapt them to give them a bit more focus and perhaps some more emphasis on critical mineral supply chains. It's going to take a lot of legwork to work this out, and it's obviously not going to be solved in this one session.

However, I think everything has to be incentive-driven. Those incentives can take the form of tax incentives. They can take the form of research subsidies. Sometimes it's just a case of coordinating existing subsidies and wrapping them up into a package that makes them more accessible to companies that need to do it. I believe most of the tools are already there in the tool box, but there has to be effort put into coordinating everything and making it one sensible, strategic package for developing this industry.

In other words, we should be doing this with intent and deliberately. We should know exactly what we're aiming at before we start, before we embark on it, because that is what's going to attract investors and it's what's going to impress the end-users such as the automakers. If they decide that we have our act together, they might well follow suit and sign on with us.

Mr. Richard Cannings: Thank you.

Mr. Chair, how much time do I have left?

The Chair: You have just over a minute.

Mr. Richard Cannings: I'll turn to Ms. Lappin to follow up on what Mr. Deith just mentioned. He was talking about the same thing you were in terms of having a real plan, but I think you mentioned something along the lines of government procurement or things that a federal government could do to get some of these projects through that critical stage where they need to scale up. Would you like to expand on that?

Ms. Liz Lappin: Sure. There are a number of areas, of course, where the government might be looking to purchase equipment that uses lithium-ion batteries or similar technology that would go into an EV. The things that immediately come to mind are electrifying fleets, and so on and so forth, and even materials for defence.

I recognize that there are certain activities that are federal versus provincial, but within the context of our net-zero aspirations moving forward in Bill C-12, it might be interesting to tie those ambitions to helping the lithium-ion battery supply chain in Canada evolve and having government procurement incent that.

Does that make sense?

● (1200)

Mr. Richard Cannings: It does. Thank you very much.

The Chair: Thank you, Mr. Cannings.

We're going into the second round and we have only 15 minutes left, so we probably won't get through the whole round.

We'll start with Mr. Zimmer, for five minutes.

Mr. Bob Zimmer (Prince George—Peace River—Northern Rockies, CPC): Thank you, Chair.

Good morning. I appreciate your appearing before our natural resources committee to speak to us on the topic of critical minerals, and probably more importantly, the associated value chains in Canada and how critical those are. As those critical minerals become ever more important in the electrification of our nation and our world, Canada will be once again a world leader in their production.

That said, the positive can quickly be outweighed by Canada losing control over it. The concerns around foreign takeovers of our Canadian mining sector are real for many Canadians. We all know how mining is always looking for much-needed capital to match the exploration potential with developmental potential. I see that in my northeastern B.C. riding. Mining is a big deal up here. It's what we do, but it's always tough to get that capital. When it happens, though, a lot that is positive happens in our community.

Certainly, capital is more than important; it's crucial, as we saw in a recently attempted takeover of Canada's TMAC Resources. I'll refer to an article in The Globe and Mail:

> This monopolizing aligns with China's years-long effort to dominate the global supply of minerals, including its grip on the 17 rare earth elements—vital for the technology we use today and will use tomorrow, from the solar panels, wind turbines, electric vehicles and fast-charging batteries that could be the key to a clean-energy future to cutting-edge military tech and weapons.

Some of you have already mentioned this and concerns about turning that potential over to communist China.

My question is a simple one. I'm assuming I know the answer, but I'm going to get into another question after that.

Are you concerned about the Chinese communist government's monopolies, global dominance, and so on, and other competitive nations and their potential takeovers of our Canadian operations?

Anybody can go ahead.

The Chair: I see that Mr. Deith's hand is up.

Mr. Jamie Deith: Yes.

Mr. Bob Zimmer: That's not what I expected.

Is there anybody else?

The Chair: Brevity is useful sometimes, Mr. Zimmer.

Mr. Bob Zimmer: Yes, exactly. Let's move on.

I think we are all concerned by that. We see it again with Tanco in Manitoba, with cesium, and the potential that's there for us domestically, but we're basically handing that over to a country that may withhold that product in a world that's going to desire that product.

I guess my question really is about getting to the bottom of what we can do. We all know that capital is important. We all know that even foreign investment can be very important to the mining sector. The reason why mining companies go for capital outside our borders is that they can't find it inside, domestically.

I'm sure that most of our companies would love to be Canadian-only companies, have investors from Canada, produce products for Canada and see that success, whether it's developing the raw resource or the refined product. We already talked about the value. Mr. Deith talked about how graphite can go from $1 to $5 just based on some refinement and some value adds here in Canada.

What can we do so that our mining industry is domestically healthy, so that the mining sector and the related raw and refined materials aren't so much at risk? I know that many of you have spoken to this already, but can you be more specific? This is where we can change things. We can make it more competitive. We can look at what the regulations are for you. We know that the regulations around mining are, I would say nicely, extreme.

Maybe you can speak to that. What can we do in a positive way to best strengthen our industry and protect ourselves from that foreign takeover?

Let's go to Ms. Lappin, Mr. Moores, Mr. Deith or the Yukon chamber. Any one of you can go ahead.

● (1205)

Ms. Liz Lappin: Some folks had their hands up, so I will let them go first. Then I can jump in.

Mr. Donald Bubar: If I may, I'd like to comment on your question on China.

Mr. Bob Zimmer: Yes, sure.

Mr. Donald Bubar: We have to be careful not to overly generalize. Not every Chinese company is controlled by the Chinese Communist Party. I happen to know for a fact that the company that took control of the Cabot Corporation and the Tanco mine in Manitoba is an example of a very entrepreneurial publicly traded company in China that is not controlled by the Communist Party.

Many companies like them are open for collaboration with Canadian companies. Because we're still at the very early stages of starting these supply chains, we need to be able to have that door open, too, to be able to work sometimes with Chinese companies.

Mr. Bob Zimmer: Mr. Bubar, I would like—

The Chair: I'm going to have to stop you there, Mr. Zimmer, unfortunately. Your five minutes are up.

I was mistaken earlier. We have another half hour. We're not stopping at 12:15 p.m.

Mr. Lefebvre, you have the floor for five minutes.

Mr. Paul Lefebvre (Sudbury, Lib.): Thank you, Mr. Chair.

It's a very fascinating discussion today. I'm joining you from Sudbury, Ontario. We call ourselves the mining innovation capital of the world, with everything going on here. There are nine operating mines.

Before I get into my questions, I find Mr. Zimmer's comments very interesting, because he was going down that road about takeovers here last week as well. Here I am in Sudbury, and back in 2007 we had two Canadian companies—Falconbridge and Inco—that were taken over by foreign companies. It was actually the Conservative government at the time that allowed it. Minister Clement actually said that Sudbury had to do that because it was the “Valley of Death” up here and there was no future in mining. Anyway, I just find it.... Thirteen years later, look at how our role has changed. We all realize the importance of hardrock minerals and metals and the importance it will have in our economy.

Again, thank you so much for joining us. There's so much I want to talk about.

I liked that expression, “from mine to sale”. Mr. Moores, I think you're the one who mentioned that.

Mr. Moores, what we're hearing a lot about here today is that we need to put in measures or regulatory policies to say—and I think most Canadians would agree—that we need to have a made-in-Canada solution and a supply chain that is in Canada. Now we're trying to determine what the gaps are, where the opportunities are, and what measures we need to put in place. That's what Mr. Zimmer was asking you about. What concrete measures do we need to put in place that we can provide in our report and give to Parliament?

What are countries other than China doing? I know that Australia is also looking at this very seriously. I know that they have engaged with Canada to see how we can collaborate. Very quickly, I want to know what other countries are doing in this space that we're not doing.

Mr. Moores, do you want to start?

Mr. Simon Moores: Yes, sure. I would look at what the European Union just announced two weeks ago, $3 billion into the battery value chain, as they call it, the supply chain. That is direct federal investment into, say, the top 10 companies in each stage of the chain: mining, chemicals, cathode/anode, battery cells. It's coherent. All those companies are talking to each other through various mechanisms like the Battery Alliance. The funding as well, and the legislation, are all linked up together in one. I think that would be a success as a result. I don't think Canada has done anything at that level yet.

Mr. Paul Lefebvre: Thank you for that. It means we should probably get the EU representative on that file to come to this committee to explain their policies and what they're doing.

What is Europe's intention of getting their minerals and their metals to do the batteries? Obviously, they have some in Europe, but not all of them, I would guess, so what are the intentions there? Where are they going to be extracting or purchasing these resources?

Mr. Simon Moores: Yes, lithium, for example, from countries like Australia, countries like Canada—

Mr. Paul Lefebvre: Exactly, and with that, I'll talk about the elephant in the room here. If Canada says, “Well, you know what? We're not going to be exporting anything. The minerals and metals, we extract them here and process them here, and we want the value added to be done here with the measures we would put in place”, how would a region like Europe react to that?

● (1210)

Mr. Simon Moores: They're also beginning to invest in their own domestic sources, but they're very early-stage, not in production. That's a long-term game as well. They know what the long-term solution is: They have to produce at least some minerals themselves. That's a big step for a region like Europe.

Mr. Paul Lefebvre: For sure, because they're not there yet, and that's why a country like Canada with an abundance of that.... I think we've been a bit slow or a bit indifferent, because we're happy to extract and, in certain cases, to process, and after that, the value added is basically sometimes shipped around the world.

Mr. Deith, I really enjoyed your presentation as well, because you're at the forefront of that. You're developing a mine and you're feeling this right now. Certainly, as a Canadian, you want to see how we can do this all in Canada and how we can all benefit from this from coast to coast to coast. I know you talked about some measures, and I'd like you to maybe re-emphasize the challenges that you're seeing and what the federal government could do to really enhance putting in the measures to create this supply chain across our country.

Mr. Jamie Deith: First, to summarize the issue, we can develop the capacity to extract the minerals, as you rightly point out. At the moment, there is no further processing domestically that we can sell to, so there is no value-added processor that we could sell to. That leaves us with the choice of developing it ourselves, which we're happy to do, but, like everything, it requires capitalization, and the framework is not there to encourage that capitalization. In part it's because a value-added processor currently has nobody to sell to further on.

There are two or three stages in this. You have to have initiatives that encourage all of those things to be put into place so you see the processing developing at multiple stages all at the same time. Then everybody can come online and start feeding through a system.

One other comment I'd like to make—

The Chair: I'm going to have to interrupt, Mr. Deith. I apologize, but we're beyond our time, so we have to move on.

Mr. Jamie Deith: No problem.

The Chair: Mr. Simard, we go over to you for two and a half minutes, sir.

[*Translation*]

Mr. Mario Simard: Thank you, Mr. Chair.

Mr. Deith, in your presentation, you said that Canada has two options: either we remain a supplier of raw materials or we move into secondary or tertiary processing. You said there's a gap in Canada in that regard. You ended by saying that there were many good ideas, but you didn't have time to list them.

My question is for everyone.

Can you briefly tell us what your first steps would be to develop this critical metal sector in Canada? In the short term, what could be done to advance the Canadian ecosystem around critical materials?

[*English*]

Mr. Jamie Deith: In terms of concrete suggestions, I know it takes time to set up new programs. It even takes time to thoroughly analyze them. In the way of a specific suggestion, there is a successful framework under the METC grant program for encouraging prospecting and the actual finding of minerals. That has proven to be a very strong incentive to quickly bring investors online in order to encourage the finding of minerals.

That program currently does not help us in terms of developing the secondary and tertiary processing that has to go after that. One of the recommendations that I would have is to either expand or redirect some of the resources dedicated to the METC grant program into developing this sector.

I would encourage that it be very targeted. I don't think we want to be subsidizing every industrial facility that people have in mind. I think we have to decide, as a country, that this is a priority item, so therefore we will encourage specific development of this type of process. That is one solid thing.

I would emphasize that it is going to have to be a coordinated effort. It's going to require stakeholders from all across this sector in order to have a fully coherent program that gets political buy-in almost universally.

I hope that helps.

● (1215)

The Chair: It does. Thank you.

We'll have to stop there and move on.

Mr. Cannings, it's over to you, for two and a half minutes.

Mr. Richard Cannings: I'm going to turn to Mr. Bubar, who finished up his presentation talking about tailings extraction and the opportunities there. Tailings fields are scattered across Canada. They are certainly all over parts of my riding.

Can you expand on that particularly, not just the opportunities but what percentage of the production of various minerals might come from reprocessing a tailings field?

Mr. Donald Bubar: There is starting to be more interest in this from the federal government. There's a national organization for abandoned mines sites. Traditionally, they are viewed as perpetual liabilities and no-go zones, but they are starting to do some research on them to see what's there. In most cases, we don't really know until we go in, do some sampling and analyze some material to see what's there, and how it occurs. After you've done that, you can start to develop some ideas on what can be done there.

That's just getting started, actually. I've been able to get into a few sites that have allowed us to do that. I'm very inspired by how many possibilities there are now. Some major companies are also starting to think about this. You may have seen the news that was published by Rio Tinto on how they are now recovering the rare element scandium from titanium mine tailings from their operation in Quebec.

It's now starting to get thought about by other current producers, too, as a means of producing these non-traditional minerals that are in the waste streams from existing operations. It's an exciting opportunity. As I said earlier, it's a matter of creating a new precedent for doing this to show everyone else how this is possible, what kind of an opportunity it represents, and then allow entrepreneurial companies, like us, to start evaluating them.

Mr. Richard Cannings: What are the barriers for that action? If you have an abandoned mine site with a lot of cost, which a lot of the time the government has taken on, especially north of 60, and perhaps various provinces, do companies like yours, which want to go in there and look for these elements, have to assume some of those risks? What are the barriers to actually going in and doing that analysis?

The Chair: Mr. Bubar, we're going to have to hold that thought. We do have to stay on time.

Apologies, Mr. Cannings.

Mr. Lloyd, you have the floor for five minutes.

Mr. Dane Lloyd: I'm ceding my time to Mr. McLean.

The Chair: All right.

Mr. McLean, you have the floor.

Mr. Greg McLean: Thank you, Mr. Lloyd.

Thank you, Mr. Chair.

First, let me congratulate all the witnesses here who are remediating previous mining tailings, obviously getting value from where we didn't see value before.

I'll go right to Ms. Lappin here.

Ms. Lappin, thanks for adding more value to the bounty that we're making out of the oil-soaked land up in northern Alberta with some more lithium there. I know you came up with some solutions there as to how we can provide more financial support to the battery mining industry. Can you contrast that—if you could, please—with Nemaska Lithium, which is one in Quebec where all kinds of federal and provincial government money and all kinds of super flow-through were expended over the last decade, all to be worth, in the end, nothing? Now the Quebec government is going to reinvest $600 million in order to try to keep it alive. All kinds of government support goes into these, and often it doesn't get them over the line as far as integrating the value chain is concerned.

How do you think the proposals you're coming up with are going to provide a different result?

● (1220)

Ms. Liz Lappin: That's a great question, Mr. McLean.

Certainly, I think there are a lot of lessons that can be taken away from what has happened with Nemaska. We understand that the deposit there is strong, but we also understand that the production of battery-grade materials is challenging and complex. Moving forward, we have to take away those lessons learned. It's a strong signal from the industry that it's not just public money that's gone into what I've been referring to as the new Nemaska, the refinanced Nemaska. There is certainly strong support for that moving forward.

We also can't let those failures.... Maybe you're not calling it a failure, but those things are learning opportunities. We can take those lessons and apply them to the rest of the deposits that we have, because Nemaska is not the only lithium deposit in Canada. There are a lot of things that we can do to move those other deposits forward.

Mr. Greg McLean: Thank you very much.

Mr. Donald Bubar: I can add to that, too, Greg, if you'd like, for a few seconds.

Mr. Greg McLean: Actually, Don, it's okay. I have to get to some other questions here, but thank you.

I'm going to go to Mr. Hartland next.

Mr. Hartland, in terms of the contributions that native organizations are making towards mining developments in Canada, how do you see that being impacted by the Impact Assessment Act that's recently been applied to all mining developments?

Mr. Samson Hartland: That's a very good question.

We're not familiar so much with the Impact Assessment Act here in Yukon because we have a made-in-Yukon solution, known as the Yukon Environmental and Socio-economic Assessment Board. It's a tri-party agreement between first nations, Yukon and the federal government when it comes to environmental assessment reviews. It's born out of the umbrella final agreement with Yukon first nations. There are 14 settled and self-governing first nations located within the Yukon. I should say that 11 out of 14 are settled; three are still unsettled. Those three that are unsettled, I believe, would be subject to potential legislation similar to this.

Do you want me to speak more about YESAB, or would you like me to save you on the time?

Mr. Greg McLean: No, that's good. Thank you for saving time.

I have another question, for Mr. Moores.

We heard earlier about the cesium mine takeover—the Tanco Mine—by a Chinese entity in Manitoba. The Tanco Mine provides 85% of the world's cesium. We're not pure on this because it was sold by an American company to a Chinese company.

Mr. Moores, can you let us know what effect China's having 85% of the cesium in the world has on the supply chain?

Mr. Donald Bubar: That is incorrect information, Mr. McLean.

That operation has essentially no recoverable cesium left there anymore. That's why Cabot sold it; there was nothing left.

Mr. Greg McLean: Okay.

Thank you.

Mr. Donald Bubar: It was a producer of cesium. It no longer is, other than.... I think they're trying to recover some from the waste.

Mr. Greg McLean: Thank you for that. It is much appreciated.

Mr. Simon Moores: I'll quickly give you my point on that.

Cesium is not my speciality at Benchmark. However, I would say that there should be alarm bells if one country owns over 50% or more of any raw material. That's our metric.

Mr. Greg McLean: Thank you.

Mr. Donald Bubar: We can take care of that, Greg. Avalon has a tremendous cesium resource, and we're waiting to try to move forward with it.

Mr. Greg McLean: Okay. Thank you, Mr. Bubar.

Do you want to add anything, Mr. Bubar, to the previous questions?

Do I still have time, Mr. Chair?

The Chair: You have about 10 seconds, if you have something quickly.

Mr. Greg McLean: Go ahead.

Mr. Donald Bubar: Which one would you like me to speak to, specifically?

Mr. Greg McLean: It's the one you wanted to opine on earlier, on the Nemaska Lithium.

Mr. Donald Bubar: I followed the Nemaska story. The mistake they made was that they took a miner's approach and tried to make it too large-scale too quickly. With many of these operations, you're best to start out at a more modest scale and make sure your process flow sheet works. You start with a small, modest amount of product to the market and then scale it up after time.

If you build it too big and your plant doesn't work right from day one, then you're going bankrupt.

The Chair: I'll have to stop you there.

Thanks, Mr. McLean and Mr. Bubar.

Mr. Sidhu, you have the floor for five minutes.

Mr. Maninder Sidhu (Brampton East, Lib.): Thank you, Mr. Chair.

Thank you to the witnesses for joining us today.

Ms. Lappin, in your opening remarks you mentioned challenges faced, such as the high volatility, competition for capital, complex nature and policy development. Could you speak to these challenges and to the solutions you would recommend?

Ms. Liz Lappin: Sure.

The volatility of price is something that Simon referenced earlier. Speaking with my E3 Metals hat on, weathering those changes has been a challenge over the last five years. That speaks directly to access to capital. We're developing a critical minerals project in a jurisdiction in Canada that is competing for capital against areas like South America and Australia. We have to make sure that our projects are just as good as those. Then we have to instill confidence that we will actually be able to get our project over the line. I think that other critical minerals developers are probably facing similar challenges with those things.

In terms of the solutions, I think what this comes down to is attracting that capital to Canada for good Canadian projects that have been validated and providing incentives or advantages, essentially—either through tax policy or through any other kind of carrot—that would attract that capital into Canada for Canadian projects.

● (1225)

Mr. Maninder Sidhu: Thank you for that, Ms. Lappin.

A bit earlier, my colleague Mr. Lefebvre touched on what other countries are doing. Mr. Moores, you spoke about the abundance of resources here in Canada. What other countries would you say have vast supplies of critical minerals? What do you think we, here in Canada, can learn from these countries?

Mr. Simon Moores: In the battery EV supply chain, Argentina, Chile and Australia would be the ones to look at.

Australia, for example, has been, in the past, purely raw material, shipping spodumene concentrate—which is lithium—to China, and then China value-adds it, but they're building the ecosystem now. I think Australia is a good place to start to see what they're doing—certainly in WA.

Mr. Maninder Sidhu: Thank you for that.

Mr. Bubar, I really appreciate your positive outlook, by the way, especially going back to extracting valuable critical minerals from waste left behind. Going back to the question from my colleague on liability, I'm hoping you can elaborate. I think the time did run out earlier.

Mr. Donald Bubar: Often there are closure plans in place on these closed mine sites that have financial assurance bonding requirements that often can be pretty intimidating to try to take control of if you're a small-cap entrepreneurial company.

That's the circumstance we've been trying to deal with here lately, which is to find a way to find some support to put behind it. In many cases, they're treating everything on the site as a liability, when in many cases it's infrastructure. If the tailings are full of valuable minerals, it's an asset, not a liability. It's a bit silly how these numbers are actually structured at the end of the day.

It needs a fresh look in this context to apply more realistic numbers in terms of the closure plan financial assurance bonding requirements.

Mr. Maninder Sidhu: Thank you for that, Mr. Bubar.

Talking about our supply chains, I'm wondering if you're able to speak to the risk associated with not securing our supply chains for these commodities that we're talking about today.

Mr. Donald Bubar: We have to get moving, because there are other countries out there that have similar aspirations. We could miss the boat if we don't get going here quickly.

I'll speak to one question that I think Mr. Deith partially answered earlier. One thing the federal government could do is something similar to what the United States did. It could create a stockpile of critical minerals that could then be used as a way to provide offtake commitments to aspiring new Canadian producers to buy their product. That gives them better access to the capital they need to build the next stage in the downstream in their project development.

By accumulating a stockpile of these critical materials, you then have a way to attract some of the other manufacturing businesses to Canada to take advantage of the availability of the critical materials.

The Chair: Thank you, Mr. Sidhu.

Mr. Patzer, over to you for five minutes.

Mr. Jeremy Patzer (Cypress Hills—Grasslands, CPC): Thank you very much. Thank you, everybody, for being here.

I'm going to start with the Battery Metals Association of Canada, Ms. Lappin, if you don't mind. I'm just wondering about the materials needed to build a lithium battery. What percentage of everything that is needed is currently available in Canada?

● (1230)

Ms. Liz Lappin: That's a great question. I wish some of our colleagues from NRCan were on the call. They could probably answer more accurately than me, but I believe we have 80% to 90%, or even 100%. We have almost everything.

Mr. Jeremy Patzer: Percentage-wise, we do have all the materials present here in Canada. How many of them are being extracted and are at the point where we can start producing batteries?

Ms. Liz Lappin: I would probably defer to some of my other colleagues on the call. I'll just say what I know and then pass the baton.

Lithium isn't currently being extracted. I know that we have some nickel and cobalt refining in Alberta. We obviously have some graphite production.

I'll pass it over to my other colleagues to expand on that to provide you a fuller answer.

Mr. Jeremy Patzer: Sure. If anybody else wants to expand on that, that would be great.

Mr. Simon Moores: I'm happy to quickly jump in on that.

The materials that go into a battery—if you were a battery maker, the things you would buy—are zero. Canada doesn't produce any of it because they're specialty chemicals. Canada has the raw materials. It doesn't have the materials to go into batteries, and that's the midstream opportunity that is there for Canada.

Mr. Donald Bubar: In terms of raw materials, we have them all in the ground in abundance.

Mr. Jeremy Patzer: Mr. Deith, did you have something you wanted to add to that?

Mr. Jamie Deith: I was going to say zero, so Simon and I are definitely in tune on this question.

Mr. Jeremy Patzer: I have a question in regard to the CUSMA deal. In some of the research I'm doing.... I'll admit I'm not an expert on the deal per se either, but I want to ask this anyway: “indicates that “lithium batteries are an 'essential' component for the domestic industry, and determines that countries have a 3-year grace period to ensure that 75% of their lithium is sourced regionally in order to avoid paying tariffs.”

I'm just wondering if anybody has any comments on that, and within that three-year timeline, whether we are positioned to get going so that we can hit that 75% target and not be in a position where we have to pay tariffs.

Ms. Liz Lappin: I can't directly answer your question, unfortunately, Mr. Patzer, but what I would say is that I think the industry would benefit from additional clarity on the various trade agreements and how they can benefit and potentially put certain projects at risk in the industry.

Mr. Jeremy Patzer: Does anybody else have anything they want to add on that point?

Mr. Samson Hartland: Mr. Chair, this is not a direct answer, but a quick answer to put things into perspective. We have an abundance of materials, as noted earlier, but if you were to go through the environmental assessment process to permit one of these mines to meet those demands, you're looking at anywhere from three to 10 years.

Mr. Jeremy Patzer: Wow. Basically, the timelines to get an approval.... Let's say tomorrow I wanted to start a project to get some of these materials. To be able to get that assessment done and to get the approvals, it might actually go beyond that three-year window.

Mr. Samson Hartland: In fact, I would put money on it and guarantee that it will go beyond that three-year window, here.

Mr. Jeremy Patzer: Wow. Okay.

Do you have any suggestions, from your experience, about what it would take for us to speed up the process and put our country in a position that is not so far behind everybody else who's already producing?

Mr. Jamie Deith: At the risk of harping on the same point, I believe there's a significant advantage for a raw materials supplier [*Technical difficulty—Editor*] to sell to. As a Canadian producer, logistically there's a big advantage to selling our graphite to someone in Canada or the United States. That's a better proposition for us than shipping material to China to be processed—or to any other overseas destination, for that matter.

There is an importance to having those additional, value-added steps. Either we're doing them or there's an ecosystem built to do them. From my point of view, that is probably the main driver behind getting things going.

In terms of permitting, it's very much project-dependent. Our own example would be one where it's fairly easy to permit, just because of the specific environmental circumstances of our operation. It will depend, but I do think the estimate of three to 10 years is fairly accurate for projects in general.

● (1235)

The Chair: Thanks, Mr. Deith, and thanks, Mr. Patzer.

We'll move on now to Mr. Weiler for five minutes.

Mr. Patrick Weiler (West Vancouver—Sunshine Coast—Sea to Sky Country, Lib.): Thank you, Mr. Chair, and thanks to the witnesses for joining us today for some very interesting discussions.

My first question is for Mr. Bubar. You mentioned that you have a number of exploration projects for a number of rare earth elements. You mentioned that demonstration projects funded by the government on different topics would help with this. What is needed to bring these projects into production, beyond simply going through the regulatory process?

Mr. Donald Bubar: As I mentioned earlier, the Saskatchewan Research Council has created a very positive precedent there for a modest-scale demonstration plant to process rare earth minerals and also a facility to do the separation part of the processing required to make the individual rare earth oxides. That's where a lot of the costs and challenges are for aspiring new producers.

Getting that started is actually helping us with our project in the Northwest Territories, where we have an Australian company now as a partner. They are now working directly with the Saskatchewan Research Council on getting that started. Once we do, then we see the potential there to grow production over time as we get the market established and can expand production capacity. That's the way you have to look at these things.

Mr. Patrick Weiler: Just as a follow-up to that, apart from China, what other countries are doing this effectively right now, and what can we learn from them?

Mr. Donald Bubar: Not many. China has been way ahead of us on this all along, recognizing that they have to build out the downstream to justify the development of the upstream side. It looks like the EU is now starting to really take the reins on it over there, from what Simon was saying earlier and from what I've been witnessing.

Mr. Patrick Weiler: My next question will be for Mr. Moores. I understand that one of the ways Europe is looking to source inputs for batteries is actually recycling batteries that are at the end of life. I was hoping you could comment a little bit on that and what Canada could learn from that as well.

Mr. Simon Moores: Battery recycling is a really important part of this ecosystem, not just to be responsible in closing the loop, but simply to get rid of these batteries; otherwise, at their end of life you're going to have mountains of lithium-ion batteries down the line. This is a post-2025 thing.

The other key thing is, if you're recycling the battery, it doesn't necessarily mean you can use the lithium out of there or the cobalt out of there in a new lithium-ion battery. I think that's kind of a misunderstanding. That stage of taking out lithium and putting it back to use in a battery hasn't really been cracked yet in a consistent way.

There are still challenges to remain, but the Europeans are pushing ahead with battery recycling and the amounts of recycled components reused in a battery, just because they want to set the tone on making a responsible supply chain. I think right now that's where we stand.

Mr. Patrick Weiler: Thanks for that clarification.

I was hoping you could maybe speak to the level of risk that's out there right now when a country like China controls.... Maybe it's not a monopoly, but a controlling stake in a particular mineral, having the ability to shift the price and oversupply the market. When another country looks to get involved.... How can countries like Canada respond in a situation like that?

Mr. Simon Moores: Certainly in our industry, I think it's really about controlling the capacity in the supply chain and what I call the sway of industrial power. I think Canada's response is simple—you build the industry, and you build the competencies and capacity for yourself. Batteries and electric vehicles are going to have a huge market in every continent of the world. They're replacing pretty much every car on the road. There are going to be energy storage systems.

You've seen what's happening in Texas with the snow storms. Cities are going to build battery capacity as backup power and for more flexible grids. These are all lithium-ion batteries, so I think the response should be that you just have to build regional domestic capacity, not just for the country but for the continent.

● (1240)

Mr. Patrick Weiler: Thank you.

This last question is for Mr. Hartland. You mentioned some of the challenges in this, but I was hoping you could speak a little bit more to the challenges of extracting and processing critical minerals in remote and isolated or northern communities.

The Chair: Give a very quick answer, please.

Mr. Samson Hartland: I'll do my best.

We do have a complementary road network. However, there are access points that need to be built in order to be able to get into the most strategic areas of Yukon. We are strategically located close to an open-water port. Skagway is only a couple of hours away from Whitehorse. Getting minerals to markets and refinement is quite advantageous for where we are in relation to Alaska. Of course, we do have domestic deepwater ports available to us as well in the port of Stewart.

With all that said, typically our stuff does get transported down to Trail, British Columbia, where it is right now. There's a particular project that is extracting a critical mineral, indium, out of the Keno Hill project, but it doesn't get a payback for it, and I don't understand where that mineral goes. This is the whole downstream effect that we're talking about in terms of where the critical minerals can be extracted and how they can be refined. There are some opportunities, and I know some people online here know more about that than I do.

I hope that helps provide some perspective.

The Chair: Thank you, Mr. Hartland and Mr. Weiler.

We have Mr. Simard for two and a half minutes, and then we will finish with Mr. Cannings for two and a half minutes.

[*Translation*]

Mr. Mario Simard: Thank you, Mr. Chair.

Something piqued my curiosity earlier. I think it was Mr. Bubar or Mr. Deith who made the comment.

You said that a reserve of critical minerals could be a solution. This raises the question of the percentage of extracted minerals that are exported. What percentage of the minerals isn't processed or treated here?

Mr. Bubar and Ms. Lappin, do you have any statistics on this? What percentage of the extracted critical minerals is directly exported without processing here?

[*English*]

Mr. Donald Bubar: There aren't very many being produced now, and if you do, you have to ship them offshore because there is no refining capacity at the present time. I think a lot of the problem is that this has been the culture of the mining industry historically, to just make the concentrates and then ship them somewhere else for all the downstream value added. It's never been a part of the culture of the industry in Canada to create value added. It's still a learning curve for everyone to climb on this.

Ms. Liz Lappin: To add to that, if I may, specifically with respect to Nemaska, Nemaska was going beyond the concentrate to a battery-grade material. That was something that was specifically new to Canada's mining industry, and there's also the direction that the lithium industry in Canada is considering, to make battery-grade materials that can meet the spec of OEMs.

Mr. Jamie Deith: Speaking for our own operation, our primary offtaker is in the United States, and I would estimate that this accounts for about 85% of the value. That's unprocessed material from the concentrate level, but that's not made for battery input. It's actually for an indirect steel input.

There are some materials to which we have been able to apply some value added, and they are actually shipped domestically. We have a couple of customers domestically, including a graphene customer, and I would describe that as more thorough value added than even battery minerals would be.

The Chair: Thanks.

Thank you, Mr. Simard. I'll have to stop you there.

Mr. Cannings, you are last in the batting order today.

Mr. Richard Cannings: Thank you.

I'll go to Mr. Bubar again, to get some more details on these really rare minerals, metals, things like germanium and indium. You mentioned cesium. I know Mr. Hartland mentioned indium that goes for processing to Trail, British Columbia, in my riding. I know the tech smelter there is a big world producer of germanium and indium, largely I think from its lead-zinc smelting out of the Red Dog Mine in Alaska.

I'm wondering if you could finish by commenting on Canada's potential for these types of metals. Maybe you're only producing 20 kilograms of it, but you can become a big producer at that scale. Where are we in Canada for those materials?

● (1245)

Mr. Donald Bubar: We're in the very early stages, frankly.

Indium often occurs with zinc, and that's why it's recovered from the zinc ponds at the Trail smelter, but it occurs at higher concentrations in other types of mineral deposits. One of them is tin greisen, of which we have a classic example in southwestern Nova Scotia, where it is very highly enriched. There's also zinc there, but these elements can be recovered from the same resource.

As I mentioned earlier, there's also all sorts of lithium in the country rocks to the tin mineralization there, and similar resources in Europe—in Cornwall, England and in the Czech Republic—are now being looked at as an opportunity to recover lithium, as well as indium and tin.

Tin is an electronic metal now, too. Most people think of tin as in tin cans, but no, it's a tech metal. It's used in renewable energy applications, too, and there's no supply chain on it in Canada or North America.

Mr. Richard Cannings: Mr. Chair, I'll just leave it there.

Thank you very much.

The Chair: Thank you, Mr. Cannings.

That's unfortunately all the time we have for questions today.

I reiterate my thanks to all the panel members, our witnesses. I have to say, that was a very entertaining and very informative panel. I want to add, too, that it was maybe the most polite panel I've ever seen, because I've never seen witnesses use the "raise hand" function with that frequency before. Maybe we should consider that as a committee and adopt that going forward. I don't know what you guys think, but it's just a thought.

Again, thank you. We appreciate it. You can all sign off now.

We have to carry on with some of our own ongoing business. Enjoy the rest of your day—or, for Mr. Moores, your evening.

Mr. Greg McLean: Thanks, gentlemen and ladies.

Mr. Jamie Deith: Thank you, everyone.

The Chair: Moving back, then, to the discussion about the motion, the amendment and whatnot, I think where we left off I had indicated that I am accepting the amendment as appropriate, and then we were going to see if there is any more discussion now on the amendment before we vote on it.

Mr. Cannings.

Mr. Richard Cannings: While I agree entirely with Monsieur Simard about the content of that amendment, I don't think putting it in with the other motion would create a very useful study. It would be a study pulled in two directions at once.

While I agree with Monsieur Simard, I'm not going to be supporting this amendment, for that reason.

The Chair: Thank you.

Mr. Lloyd.

Mr. Dane Lloyd: Mr. Cannings, it's actually quite timely that you brought up your concern regarding the amendment.

Monsieur Simard, I appreciate your putting forward your amendment.

Chair, I think you made the appropriate decision here. When it was originally proposed, I thought it was a much larger amendment, but clearly the size of the amendment within this general motion is acceptable.

I would like to move a subamendment, and I hope it will be considered friendly, that we strike the wording under subsection (c) and replace it with "the impact of the pipeline cancellation on Canada's contribution to meeting the world's environmental targets."

[*Translation*]

In French, it's "l'impact de l'annulation de ce pipeline"—

[*English*]

Now I'm hearing myself in translation, so out of respect for you all, I won't go ahead and skewer the French language.

I just want to move that subamendment and I hope it will be friendly.

The reason I think it's a great subamendment is that it does address some of Mr. Cannings' concerns that it's such a broad issue, the energy transition. It could really be its own study, and what we're looking for is a very targeted study. Therefore, we propose that the subamendment say "the impact of the pipeline cancellation on Canada's contribution to meeting the world's environmental targets", which I think will give Mr. Simard and Mr. Cannings, and anyone else, a great opportunity to talk about their perspective and invite witnesses to talk about their perspective, but also keep this study very narrowly focused on the Keystone pipeline specifically.

Thank you, Mr. Chair.

● (1250)

The Chair: Thank you, Mr. Lloyd, and thank you for your comment at the outset. It's just proof that doing things this way sometimes requires a little more patience because people need to see things in front of them before they can effectively discuss it or vote on it.

On that note, could you slowly repeat what your proposed amendment is? Just so we're all clear, is this an amendment to the main motion, or is this a subamendment to Mr. Simard's proposed amendment?

Mr. Dane Lloyd: This is a subamendment to Monsieur Simard's amendment. I will repeat: Under subsection (c), the subamendment reads, "the impact of the pipeline cancellation on Canada's contribution to meeting the world's environmental targets".

The Chair: Again, just so we're crystal clear, is that language in addition to the language proposed by Mr. Simard, or is it supposed to be in lieu of?

Mr. Dane Lloyd: It is a replacement of the language by Monsieur Simard.

The Chair: Okay.

Mr. Simard, you have your hand up.

[*Translation*]

Mr. Mario Simard: I thank my colleague for his open-mindedness, but it doesn't reflect the intent behind the original amendment. Upon re-reading the amendment, I'm thinking that it might have been preferable to read it as follows: "the transition of the energy sector."

I moved this amendment because I believe we need to think about the transition of the Alberta economy, among other things, and the end of Keystone XL is a time when we can do this.

How can we redefine Alberta's economy? We had an example of this when we did a study on the forestry sector. It was said that Alberta still had considerable expertise in chemical engineering, and that these engineers could be redirected to the bio-economy. I'll give you a simple example.

The purpose of the amendment as I had worded it was to permit, in the context of Mr. McLean's motion, a study of the transition of the Alberta economy. What Mr. Lloyd is proposing is not in keeping with my intention.

[*English*]

The Chair: Okay, I see there are some other hands up. I will get to you. I just want to make it clear to everybody what we're doing.

This is what we have. Mr. Lloyd has proposed an amendment to Mr. Simard's subamendment. In the circumstances, we can debate Mr. Lloyd's subamendment. Then, we'll have to vote on it, then vote on Mr. Simard's amendment, and then vote on the motion.

I believe, Mr. Lloyd, you had your hand up before Mr. McLean.

Mr. Dane Lloyd: Thank you, Mr. Chair.

Yes, that is my understanding of this as well.

Mr. Simard, I certainly appreciate your desire to talk about things for the benefit of the people of Alberta, whom I represent. This is a cross-Canada issue. I feel that your proposed amendment to study the energy transition is such a large issue that it could really be the subject of a substantial study by this committee on its own. My effort to put this subamendment forward was not to take away from your desire to discuss the energy transition, but it was merely meant to focus the debate in the context of the rest of the motion, which is in discussions of the pipelines.

I certainly think that my revised wording, and I hope you will agree, is entirely within subject for us to call witnesses forward to talk about the energy transition in the context of the cancellation of the pipeline. I hope you will reconsider and support this important subamendment, which I feel accomplishes both our ends while keeping this debate on the narrow context. Perhaps at a later time, as this committee should deem, we will have that important study on the energy transition as you have requested.

Thank you, Mr. Simard, and thank you, committee.

● (1255)

The Chair: Thank you, Mr. Lloyd.

Mr. McLean.

Mr. Greg McLean: I'll be quick and I'll add to my colleague's comments.

Mr. Simard, we could use this committee's resources very wisely by limiting a study to six meetings, as we're doing with critical minerals. The study you want to tack on here could take a year in order to scratch the surface about what we need to do in the transition, so in the interest of actually accomplishing something in a meaningful period of time, I think we have to limit the scope here.

Thank you.

The Chair: Thank you, Mr. McLean.

Seeing no further interest in discussion, I think we will vote, first, on Mr. Lloyd's proposal to amend the proposed amendment. As convoluted as that sounds, that's as simply as it can be put.

(Subamendment negatived: nays 7; yeas 4)

Now we can proceed to continue dealing with Mr. Simard's proposed amendment.

Is there any further discussion before we put that to a vote? I don't see any.

(Amendment negatived: nays 10; yeas 1 [*See Minutes of Proceedings*])

Thank you.

Now we are back to the original text of Mr. McLean's motion as originally proposed. Is there any further discussion on that, or can we move to a vote?

Mr. Lloyd.

● (1300)

Mr. Dane Lloyd: Thank you for the recognition, Mr. Chair. I did it late to create some suspense.

The Chair: It worked.

Mr. Dane Lloyd: Being new to this committee—this is my second meeting—I haven't had the opportunity to speak to this important motion. I hope the chair and the committee will indulge a short intervention.

The Keystone XL pipeline is so important for the people of my province of Alberta, and indeed the whole country. It is so important, especially considering the context of what we've seen with our neighbours in the United States, with their oil wells being frozen over and water supplies dwindling in Texas and Oklahoma. We've seen the cost of natural gas go from $4 per million British thermal units to, in some cases, up to $1,500 during this crisis.

This isn't just about the energy security of Canada and Alberta. This is about the energy security of North America. Given the context of this latest weather situation in the United States, we have an opportunity to push forward with a study that will explore this cancellation and its consequences. It will give all parties an opportunity to look into this, because it's quite clear that the United States needs access to Canada's world-class energy resources.

Drilling down more into the impact on my riding, there is a company, Academy Fabricators. In one small town of under 1,000 people, this business alone employs 300 workers. I just got an email from them, saying they were bidding on an opportunity to provide pipe for the Trans Mountain pipeline, a pipeline that is owned by the Canadian government. They were considered for the work, and the work was given to an overseas company—an Italian company.

Mr. Chair, in the context of this Keystone XL pipeline, a company in my riding and companies across the country—in Sarnia, in Saskatchewan and in the Lower Mainland of British Columbia—are losing thousands and thousands of jobs. We are losing good, hard-working, blue-collar jobs that put food on the table because of the decisions, yes, of our neighbours to the south, but also because of decisions that our own government is making.

Without going too much on that tangent, it is so critically important for our local economies and for our regions that we explore what went wrong with this Keystone cancellation. What could Canada have done better? What could the government have done better to push this to a "yes" with the U.S. administration?

For the sake of the thousands of workers across Canada and the hundreds of workers in my riding at great companies like Academy, I urge this committee to consider voting for this motion. Let's allocate a few meetings for these hundreds of workers who have been sent home without pay because they've lost their jobs.

Thank you, Mr. Chair.

The Chair: Thank you, Mr. Lloyd.

I have Mr. Sidhu and then Mr. Simard.

Mr. Maninder Sidhu: Thank you, Mr. Chair.

It's a tough situation for many families, but last week the House passed a motion to establish a committee to study Canada-U.S. relations, including Keystone XL. We're meeting on Tuesday, and I think that would be the best forum in which to debate this. With all due respect, I understand. I have a lot of family in Alberta and I understand it's a tough situation, but I also want to make sure we utilize our time well, because there is another committee, Canada-U.S. relations, that will be studying this as well.

The Chair: Thank you, Mr. Sidhu.

Mr. Simard.

[*Translation*]

Mr. Mario Simard: I'd like to quickly explain why I proposed my amendment.

Over the past four years, the federal government has invested $24 billion to support the oil and gas industry, even though, in today's context, the majority of investors are trying to exit the fossil fuel industry.

We went through much the same thing in the lumber industry in the 1990s and early 2000s, when many paper mills closed down. Workers had to be told the truth. Unfortunately, paper was no longer in demand and a transition had to be found for the pulp and paper sector. It was difficult. Many workers lost their jobs. Personally, I feel that the federal government hasn't done enough, but that's another issue.

I feel we need to be honest with oil and gas workers by presenting them with solutions that support the energy transition. That's not passing off the problems we face today. The cancellation of Keystone XL is one of the manifestations of the collapse of the energy sector. It was the same in the Teck Frontier project.

Unfortunately, I'll be voting against the motion because it doesn't address the real issue, which is the transition of workers in the energy sector. Unfortunately, I'll be voting against the motion.

● (1305)

[*English*]

The Chair: Thank you, Mr. Simard.

Mr. Cannings.

Mr. Richard Cannings: I haven't spoken to this yet, so I thought I'd just briefly explain my reason for voting no on this motion.

I would like to support, and I do support, the workers in Alberta. I gave a speech at the emergency debate around Keystone XL, explaining why building this pipeline, other than.... Mr. Lloyd mentioned the workers who have unfortunately lost their jobs through the pipeline construction phase of this. Beyond that, there is just no indication at all that building this pipeline would by itself solve the problems of the oil industry in Canada.

I would strongly support Monsieur Simard's idea to have a study on this great transition, because that's what we need to help the workers in Alberta, Saskatchewan and British Columbia. They would get that help more quickly than if we tried to support, and kept supporting, the oil industry instead of moving towards this transition. I feel that we would not be doing them a service by doing this, because this pipeline, were it to move ahead, just wouldn't provide any more jobs in the oil industry in Alberta.

What we need is to make that transition. That's why I think this committee would be better placed to study those issues rather than try to convince the American government to change its mind on this.

The Chair: Thank you, Mr. Cannings.

I don't see any further hands raised.

(Motion negatived: nays 7; yeas 4 [*See Minutes of Proceedings*])

I want to thank everyone for their contribution to the discussion and for helping us to have a very efficient and respectful meeting.

Just as a reminder, we're meeting again this Friday, when Minister Ng will be joining us with her departmental officials.

Until then, stay safe. Enjoy your week.

Thanks very much, everybody.

The meeting is adjourned.