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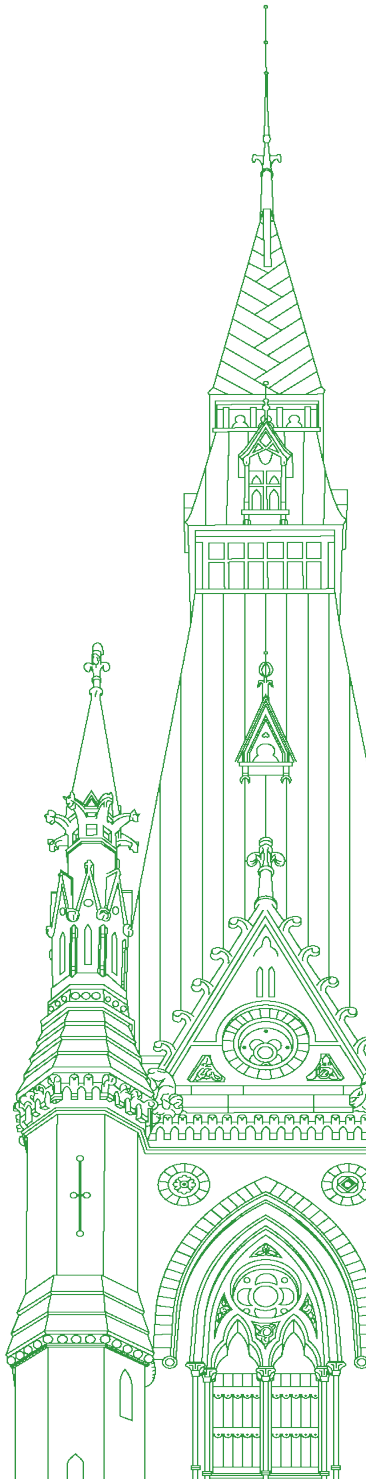

Chair: The Honourable Judy A. Sgro

Standing Committee on International Trade

Friday, May 7, 2021

● (1300)

[*English*]

The Chair (Hon. Judy A. Sgro (Humber River—Black Creek, Lib.)): Welcome to all of the committee members and witnesses.

Today is meeting number 29 of the House of Commons Standing Committee on International Trade. Today's meeting is webcast and is taking place in a hybrid format pursuant to the House order of January 25.

Before we start with our witnesses, Mr. Savard-Tremblay, you issued a notice of motion regarding Bill C-216. All of the members have it. Can I suggest that we reserve 15 minutes at the end of the meeting to discuss it, or do you want to discuss it now?

[*Translation*]

Mr. Simon-Pierre Savard-Tremblay (Saint-Hyacinthe—Bagot, BQ): That is precisely what I wanted to ask you, Madam Chair.

The fact that you are suggesting it is perfectly fine with me, and I thank you.

[*English*]

The Chair: Thank you very much, Mr. Savard-Tremblay.

Resuming our study on clean technology exports, pursuant to Standing Order 108 and the motion adopted by the committee on Friday, March 12, THE committee will resume its study of Canada's exports of environmental and clean technology goods and services.

Before us today, as witnesses for this study, we have, from the Canadian Association of Petroleum Producers, Tim McMillan, president and chief executive officer; from First Cobalt Corp., Trent Mell, president and chief executive officer; from the International Brotherhood of Electrical Workers, Matt Wayland, executive assistant to the international vice-president and Canadian director of government relations, and Ross Galbraith, international representative; and from Pyrowave, we have Jocelyn Doucet, president and chief executive officer.

Welcome to all of you, and thank you for taking the time to appear before the committee today.

Mr. McMillan, you have the floor, please.

Mr. Tim McMillan (President and Chief Executive Officer, Canadian Association of Petroleum Producers): Thank you for the opportunity to join you in this important discussion your committee has undertaken.

My name is Tim McMillan. I represent the oil and gas producers in Canada. I'll tell you a little bit about our association. We represent both large and small companies that explore, develop and produce natural gas and oil throughout Canada. Our member companies produce about 80% of both of those commodities. With them and our associate members, who are involved in the service side of our business, we generate about $116 billion worth of revenues a year, and we make up the largest component of Canada's exports.

I know that today we'll be speaking specifically about technology and clean exports. I will get into that in a moment, but we believe that responsible oil and gas development, driven by technology and innovation, is essential to a healthy Canadian economy.

Our industry recognizes the importance of delivering reliable, affordable, and responsibly produced energy that addresses important social and environmental issues, including climate change. We believe that Canada's oil and gas has a critical role to play in an integrated energy system, and is part of the global solution needed to tackle climate change. CAPP believes Canada is well-positioned to become a global supplier of choice. World energy demand is growing, and we have some of the highest quality reserves in the world.

Canada is obviously an environmental leader in general, and we take our ESG responsibilities very seriously. I think that when we look at oil and gas producers globally, Canada truly stands out, and when you look at the world's top 10 producers of both of those commodities, we are unique. The other nine include Saudi Arabia, Iran, Iraq, Nigeria, Venezuela—countries that just don't share our capacity to innovate, drive technologies, or implement them on the ground. That gives us a unique role to play, and I'll speak to that more in the moments ahead.

On innovation and technology, almost 40% of all clean-tech and green-tech investments made in Canada are made by the oil and gas industry. We have seen studies recently that say that as much as 70% of green and clean innovation spending comes out of the oil and gas sector, but we use a number of a little less than 40%, and it's having a great effect.

Over the last decade, the oil sands, for example, have seen an over 20% reduction in greenhouse gases per barrel. According to IHS CERA, a research group, it is predicted that over the next decade, innovation and technology will continue to drive a further 20% to 25% emissions reduction.

As I noted earlier, other countries that are producing large amounts of energy globally don't have this capacity. I think that Canada has a responsibility to develop these technologies and innovations and, ultimately, see them adopted globally. We most certainly are seeing that happen.

Other contexts that I think would be important are the following. If we look at energy demand globally, it is growing. It is growing across the board—every energy source, including oil and gas. We are expecting, according to the International Energy Agency's best-case scenario, to get back to record demand for oil and gas as early as 2023. We will continue to see both of those commodities growing aggressively to 2040, the end of that forecast. Gas will grow aggressively, but oil will continue to grow at a slower pace.

By 2040, the International Energy Agency expects that oil and gas will grow to a level of over half of all energy consumption globally, meaning that gas will overtake coal for the first time, which brings me to the largest single opportunity Canada has to lower global greenhouse gas emissions.

Today, there are almost 300 coal-fired power plants under development and under construction. Canada will have the lowest emission LNG, once our first major LNG facility is completed. We have done some work to look at this. If Canadian natural gas were to be used to offset the new build-out of coal in Asia and around the world, we would actually only need four facilities, the size of the one that's currently under construction, to entirely meet Canada's Paris commitment.

● (1305)

We've looked at the numbers another way, that if the almost 300 coal-fired power plants under development and construction were offset with Canadian natural gas, the savings of greenhouse gases globally would be more than Canada's entire greenhouse gas emissions today. We would be at net zero if we just took on the responsibility of offsetting the current build-out of coal.

There are a couple of challenges for Canada to meet that objective, which I would like to highlight for the committee.

One is the ability to recognize those reductions, which were set aside in article 6 of the Paris Agreement to recognize international offsets. That is the one article of that agreement that has not been finalized. Until it is finalized, the strong efforts by Canada to continue to drive down our emissions per barrel, per gigajoule of gas cannot be recognized and there is no incentive for Canada, or increased incentive, to offset those coal-fired power plants and no incentive for China or India or the other countries to get Canadian gas to do their part to offset it as well.

A couple of other areas of challenge that I'd highlight for the committee are things as simple as the infrastructure to get our products to market. The regulatory system in Canada is viewed by global investors to be challenging. Major pipelines have been cancelled, and as we build the LNG facility that's currently under construction, getting the pipeline from the gas developments to the coast is one of the big pieces of infrastructure that's needed and has been a challenge to this point. I'm very confident that it's well positioned and will get built.

I would like to highlight the other technologies that are currently coming through the process. In the recent budget, there is the carbon capture tax credit. We have 90 days of consultation to ensure that it will be a workable model that can continue to allow Canada to drive down its emissions.

I would highlight some serious concern that enhanced oil recovery was specifically excluded from that tax credit. I think that should be reversed if we want to ultimately reach the objective we're all looking for.

Some of the funding around IISD to enable infrastructure to be built is going to be very positive.

I would be happy to take questions at the conclusion, but ultimately, maybe the last message I would leave with the committee before I conclude is that Canada needs to be competitive. We need to be attracting investment in our energy resource development if we want to develop the technologies that are used here and ultimately exported around the world.

Over the last five or six years, we have seen a decrease in capital investment in the energy sector in Canada, from over $80 billion to about $27 billion this year. That's a substantial decrease. I think there is a lot of room for growth, a lot of opportunity, and I look forward to your questions about how we can contribute into the future.

Thank you, Madam Chair.

● (1310)

The Chair: Thank you very much, Mr. McMillan.

We will move on to First Cobalt.

Mr. Trent Mell (President and Chief Executive Officer, First Cobalt Corp.): Thank you, Madam Chair.

[*Translation*]

I would like to thank the members of the Standing Committee on International Trade for undertaking a study on Canada's exports of environmental and clean technology goods and services.

Our presentation will focus on the export of batteries, specifically batteries for electric vehicles, and Canada's unique position to play a dominant role in the sector.

[*English*]

As a proud Canadian and the CEO of a publicly traded company in the clean technology space, I'm excited by the opportunity for the next generation of Canada's industrial footprint. After talking about our company First Cobalt, I'll then focus on opportunities for Canada in the context of what I think is happening in the U.S. under the new Biden administration with respect to electric vehicles and specifically the battery market.

Against the backdrop of the EV revolution, the Biden presidency, I believe, represents a generational opportunity for this country, and specifically for our automotive sector, our mining industry and the chemical industry. There's a window of opportunity that could generate literally billions of dollars of economic activity, from which Canadians would benefit for generations through a reinvention of our export-focused auto supply chain.

Clean tech has come of age, and policy-makers in this country have an opportunity to seize the moment, as Canada is uniquely positioned to play a leading role not just vis-à-vis the U.S., but in the world. However, an important caveat that I want to underline in this statement is that massive investments are already being made around the world today. I already see a gradual erosion of the competitive advantage that we have before us, and I think it's important that we look to making some bold decisions right now.

I'd like to talk a bit about First Cobalt. We're a Canadian-headquartered, Canadian-led cobalt company. We own the only permitted primary cobalt refinery on the continent, and we're currently in the process of recommissioning and expanding a refinery in northern Ontario. Initially we're going to produce 25,000 tonnes of cobalt sulfate per year—that's a product that goes into electric vehicle batteries—and thereafter we're looking to expand even further to process material from the growing battery recycling market. Our initial production equates to about 5% of the global market for cobalt and 100% of production on the continent. By contrast, 80% of supply today is coming from China, with about 14% out of Europe. There's no production in the U.S. We also have an exploration project in Idaho and have exploration land in northern Ontario, with 50 past producing mines, in what's called the “cobalt camp”.

Our team is led by Canadians. We have more than 250 years of combined expertise in our start-up, both in mining and in the refining industry.

In December of last year we were the grateful recipients of $10 million in public funding to support what is an $80-million investment to restart our refinery: $5 million was from the Government of Canada in the form of a loan, and $5 million was provided by the Government of Ontario in the form of a grant. This funding is a small part of the $80 million, but it was an important catalyst. It enabled us to raise additional capital and accelerate our strategic plans to play a role in the transformation of our supply chain.

Cobalt, notably, is one of 35 elements identified by the U.S. Department of the Interior as a critical mineral. Critical minerals are those that are deemed essential to the economic and national security of the U.S., the supply chains of which are vulnerable to disruption.

Upon his election, President Biden announced a 100-day review of the critical mineral supply chain to determine how the U.S. government could reduce its vulnerability to these disruptions. All of the cobalt in American electric vehicles today is imported, so First Cobalt is an important part of that solution, starting as early as next year.

Canadian government support for a transformation of our auto supply chain more generally is going to give our industry an edge, broadly defined, not only among electric vehicle automotive companies, but in the chemical sector and the mining sector. It will also give us an edge in the rapidly growing interconnected market. Countries around the world are competing today for about 300 billion U.S. dollars' worth of investments in the EV supply chain. I want to underline that the most expensive piece of an electric vehicle is the battery and that it's made up of raw materials, almost all of which we have right here in Canada.

I want to turn to the Biden presidency, if I may, and what I see as a golden opportunity for us and our own EV ambitions.

Against the backdrop of growing EV adoption rates around the world, the Biden presidency presents an opportunity for the private sector, not just in the U.S. but also here, to work with governments. The most significant initiatives over the next four years of this administration may well be policies addressing climate change. For the U.S. to meet its Paris ambitions, aggressive actions will be required to influence industrial and consumer behaviours in the way we live our lives.

We believe the President's commitment to install up to half a million charging stations is sending a very clear message that the administration is going to support the transition to EVs. They also plan to increase incentives and tax breaks for EV purchases. Shortly after inauguration, President Biden reiterated a campaign commitment that they're going to transition their government fleet to zero-emission vehicles.

● (1315)

All of these developments in Washington present a really interesting opportunity for Canada, as the neighbour to the north. We have the industrial footprint, raw materials and engineering talent. We can play an important role and be a major player in the global EV supply battery chain, particularly in the largest consumer market in the world just south of our border.

President Biden's $2-trillion clean energy plan includes sweeping proposals designed to create economic opportunities while also tackling climate change, notably addressing the biggest, or one of the biggest, source of emissions— internal combustion engines.

EVs represent a megatrend. I don't want to use a buzzword, but it's an important one for our industry. It's a megatrend that's going to forever change the way we get around. The electric vehicle revolution has been described as an arms race. I think it's well known that North Americans are lagging behind. We lag behind Asia, and now we lag behind Europe. Make no mistake, change is coming here as well, and the change is coming pretty quickly. President Biden's focus on climate change and the flurry of EV-related investment announcements is like pouring rocket fuel on a market that's already one of the most consequential trends that we're faced with today.

The number of EV models available on the U.S. market last year was only 16. This year it's going to be more than double to at 39. By 2025 there are going to be 120 different models available. That's the sign that change is coming. As battery technology has evolved, it's going to include pickups, SUVs and crossovers, that is, the bigger vehicles that North Americans and Canadians like and want to drive. As consumer demand shifts to EV, so too must our industrial investments.

Back to Canada, I think the transformation of our auto supply chain is going to give Canada an edge when it comes to competing for the billions of dollars of capital investments being made around the world, not just in EV plants, but also in the batteries that power them. That's where I think our focus needs to lie.

Federal and provincial governments are already investing $500 million in Ford's Oakville EV and battery assembly plant. GM meanwhile is putting $1 billion into their CAMI plant in Ingersoll to produce commercial EVs. These types of investments create enormous opportunities. It's up to us now to work our way up the supply chain and try to connect some of the gaps that are emerging in our supply chain, or the new opportunities, as I like to see them.

I think there's more that Canada can do to transform the auto sector. Battery production has to be at the heart of the next steps the government takes in this area. This is where the future jobs are going to be, and where the investments will be and currently are today.

Policy-makers in Canada, if I may say, must continue picking winners as we go forward and supporting them with financial and regulatory measures. They have to foster those investments to bring the capital to our country.

By way of illustration, the EU in December 2019 approved $3.2 billion in subsidies to help boost their lag in competitiveness vis-à-vis Asia in the battery sector. That payoff was almost immediate. Despite COVID and the drop of passenger sales generally, EV sales were up 137% last year over 2020. They're now a bigger market than China.

They started 2021 with a bang as well and announced another €2.9 billion in support for yet more battery sector investments in R and D, production and installations. That unlocked, in turn, about $12 billion of private sector investment. I guess the policy gamble paid off in Europe. We're seeing it with advanced materials, cells and modules, battery systems and recycling, all now rolling out across Europe. Europe's stated goal was to produce its own battery cells by mid-decade. It's an ambitious statement in a sector that's dominated by Asia, but it looks like they're going to get there.

Canada has something Europeans don't have. We have vast mineral deposits. That's where it all starts. With these deposits, our governments should be focused on connecting the value chain from our mines through to the assembly plants, with a keen focus on battery production here in Canada. This involves not just mining the materials, but also the chemical processing, battery cell manufacturing, battery pack assembly and, of course, at the end of the life cycle, recycling the batteries themselves.

As a nation, Canada and Canadians must embrace mining. It is the solution to global warming. Without minerals, there's no clean energy future. As a next step, we need an industrial policy that's going to be centred around benefiting Canadian resources at home rather than shipping them abroad, as we too often do.

This means turning Canada into what I think could be a global battery powerhouse. Industry can't do this alone. Like Europe, I think it's going to take co-operation between the public and private sectors in the form of both policy and financial incentives.

I want to conclude by offering this perspective. There's no reason, in my opinion, why LG Chem, SK Innovation, Panasonic and all of the battery makers around the world shouldn't be looking to Canada for their next battery manufacturing investments. We've seen billions of dollars of investments going towards the U.S., and I think it's our turn.

To get there, we need a team Canada approach to attract this investment in the same way the federal and provincial governments court automotive investments. Government funding programs have to match the private sector, not necessarily dollar for dollar, but we have to be at the table together. I think Canada can win the battle to create a North American battery supply chain, given our abundant natural resources, not to mention our proximity to a clean source of power. Hydroelectric power and nuclear have a huge competitive advantage in an ESG world.

● (1320)

We have the markets, the proximity to the markets, and we have a deep pool of engineering talent. I think we have all the ingredients.

Before I conclude I want to leave you, if I may, with three ideas. First, all levels of government have to partner with industry, and we have to seize this window of opportunity now. Time is ticking. I think next year is going to be too late.

Second, the best way for us to partner is to do as the Americans and the Europeans are doing, and that is to pick the winners and provide some broad, imaginative opportunities for cash-based incentives and subsidies to the industry.

Third, and I've said this already, really the time to act is now. Many western countries are ahead of us, notably Europe and the U.S., as I've mentioned, not to mention China, Japan and Korea that were already ahead of Canada.

The green revolution really is here to stay. There's no going back. It's up to all of us to work together to ensure Canada is a leader in this new world.

I want to thank you for your time and, again, I'm happy to answer any questions.

The Chair: Thank you very much, Mr. Mell.

Now we move on to the International Brotherhood, with Mr. Wayland, please.

Mr. Matt Wayland (Executive Assistant to the International Vice-President and Canadian Director of Government Relations, International Brotherhood of Electrical Workers): Thank you, Chair, and you'll notice—we didn't plan this on purpose—that our presentation will dovetail nicely with Trent's, from Cobalt.

Good afternoon, committee members, fellow witnesses and guests. I would like to thank you for allowing us to present here today to the members of the Standing Committee on International Trade for your study on Canada's exports of environmental and clean technology goods and services.

My name is Matt Wayland. I am the executive assistant to the international vice-president and Canadian director of government relations for the International Brotherhood of Electrical Workers, or IBEW. Joining me here today is Ross Galbraith, international representative for the IBEW from Atlantic Canada.

The IBEW represents 70,000 members right here across the country in Canada and 775,000 members in North America who work in a variety of sectors in the electrical industry. The IBEW is the longest-standing and largest union of electrical workers in the world. Work in the electrical sector is extremely complex, and the majority of our members work in highly skilled trades, technical and professional jobs, with many coming from science, technology, engineering and mathematics, or STEM, occupations, such as the various types of technicians and technologists we have, members of the skilled trades, engineers, information technology and communication specialists.

As technology in the electricity industry has changed over the last 130 years, we've been there to change along with it. We welcome the work of the committee to undertake a study of the Canadian exportation of green, clean and low-carbon technologies.

We firmly believe that there are many opportunities, as the other guests have mentioned, for Canadian technology in a variety of world markets, from our neighbours, the United States, to other growing countries and regions that are hungry for clean tech like Europe, Asia-Pacific, China and India, to name a few.

In drafting our remarks, we wanted to focus on the motion before this committee, and also ask ourselves just what clean technology is.

A recent post by Export Development Canada defines clean technology or clean tech as “any process, product or service that reduces environmental impacts, fosters sustainability and provides goods that use less energy and fewer resources than the industry standard.”

The article goes on to quantify the growth of the clean-tech sector. Clean-tech exports have been increasing at a compound annual rate of 4% since 2008. By 2015 that value had reached $1.2 trillion yearly and is now projected to be over $2.5 trillion. Growth in this sector will only accelerate, as the other witnesses have already explained. Due to the simple fact that the world has recognized the existential threat posed by climate change, clean tech is becoming an essential component of all sectors of the world economy, not just here in Canada.

Although there are significant export opportunities in the clean-tech sector in industrial and extractive processes, transportation, recycling, energy efficiency, water management and agriculture, our presentation will focus on our area of expertise, which is electricity.

We all know the foundation of a modern society is built on access to safe, reliable and high-quality electricity. It heats and lights our homes, powers our communication and entertainment, and the many Zoom meetings we've been on over the last year and a bit. It enables information technology and increasingly will be relied upon for transportation.

Accordingly, there's a high demand around the globe for cleaner electricity generation, energy storage solutions and capacity, better utilization of our electrical grid to ensure efficient use, and reliable delivery to the end consumer.

In the interest of time, we're going to focus our comments on electricity generation and smart grid development, which includes energy storage.

We are a world leader in clean generation, with 80% of Canada's electricity coming from low-carbon sources such as hydro, nuclear, wind and solar. We have pioneered commercial-sized carbon capture and storage technology in Saskatchewan at Boundary Dam 3 for use in the thermal generation sector.

These existing investments and our expertise in this area lead to a massive opportunity to export Canadian-produced clean electricity to our friends in the United States, and Canadian-designed and -manufactured generating equipment can be exported right around the world.

An especially important opportunity exists within the well-established and well-respected Canadian nuclear industry. There's a global demand for large amounts of low-carbon baseload energy as a foundation to intermittent renewable forms of generation and for the cogeneration of hydrogen gas through high-temperature steam electrolysis.

Not only is Canada an established leader with the CANDU nuclear reactor design, but we are also at the forefront of the development of the next generation of small modular reactors, or SMRs, as recognized by the recently announced Canadian SMR road map. These reactors will be built in centralized manufacturing facilities and then transported as modules to their site location and built on site, rather than being built from the ground up.

● (1325)

This represents a huge global market to the country that can build and operate first-of-a-kind demonstration units. Not only can SMRs be mass produced in Canada and then exported around the world, but low-carbon energy produced by Canadian-based SMRs can be used within Canada as we continue to decarbonize our power grid and electrify our transportation sector. There is also the opportunity to export the final product of this technology for the sale of surplus power generated here in Canada to the United States.

Moving on to storage and grid management, you might be interested to know that the North American power grid is the largest interconnected machine on earth. As complex as our current power grid is, the grid of the future will be very different from what you and I know today, and even more complex to meet the changing customer demands and needs. How, when, and where electricity is produced, and when we use it is shifting to integrate variable renewable energy sources like wind and solar and to create efficiency in energy consumption. Smart grids will become more reliable and self-healing, providing sustainable, safe and quality electricity to all consumers.

This means that the grid itself is in the process of changing from a simple pipeline that transmits electrons from point A to point B into a super computer, with millions of controllers and sensors that utilities will be able to use to integrate distributed energy resources and stored energy, increase reliability, reduce waste, and improve energy efficiency across the grid.

Many technology companies are working on solutions to these needs and looking to partner with power utilities across Canada to develop and demonstrate these new grid management technologies. In many cases, the integrated nature of our regulated power grid could serve as a perfect test bed to demonstrate new technology that clean-tech firms can then scale up and scale out, across Canada and for export around the world.

As we have described, there is a global demand that exists for the low-carbon electricity and associated power grids that drive our modern society. Canada has a massive opportunity to export our knowledge and expertise in these areas, but to take advantage of these opportunities I have described, it would be necessary for us to foster the environment where these costly and highly regulated technologies can be demonstrated and brought to market before other global competitors get there first.

In all of the cases above, there is a role to play by our existing electrical utilities. In many cases, however, they are constrained against using rate-payer-generated revenue to invest in innovation or new technology ideas. In addition, many of the clean-tech firms in the nuclear and smart grid fields have gaps in product development funding and scale-up financing.

One of the best ways that government agencies at all levels can help Canadian clean-tech businesses scale up and export to new markets is to adopt measures that will support both clean-tech energy firms and, of course, our existing electrical power utilities, which are willing to test and deploy these new technologies. Many of these are manned by our members in the IBEW.

Whether this is direct financial support for first-of-a-kind, commercial-scale products or other mechanisms that can help overcome the financial risks for both parties in developing and demonstrating innovative technology and bringing it to the market, there is a window of opportunity that exists for Canada to not only claim a share of these global markets but to be looked at as a leader in clean-tech.

If we can foster an ecosystem that supports and nurtures these types of partnerships, clean-tech firms can both demonstrate their new products and services, and also tap into the infrastructure and operating experience as well as the highly skilled IBEW workforces that exist within globally respected Canadian electrical utilities and construction alike.

We feel this is one of the best ways to partner and develop clean-tech products that will benefit Canada, provide good-paying jobs, and compete in a global market.

Thank you to the committee chair and members. Ross and I both look forward to your comments and questions.

● (1330)

The Chair: Thank you very much, Mr. Wayland.

We're on to Pyrowave.

Mr. Jocelyn Doucet, please go ahead

Mr. Jocelyn Doucet (President and Chief Executive Officer, Pyrowave): Thank you, Madam Chair, and dear members of the committee for the invitation to speak to this committee.

I'm Jocelyn Doucet, a chemical engineer and the CEO of Pyrowave. We're a pioneer and leader in the electrification of chemical processes.

What does that mean? I'm sure you've heard about the electrification of vehicles, but probably less about the electrification of industrial processes. It means that we've developed the most advanced microwave technology using electricity for the production of low-carbon chemicals.

Our first application turns polystyrene waste into its basic constituent, namely styrene monomer, a global commodity with a market of over 30 million tonnes a year used in a variety of different products all over the world. What we do by decomposing plastics into their smaller constituents brings a lot of advantages. It increases the value by turning waste with no value in the market into a useful commodity with a high value and large market.

For example, styrene monomer can be used to make polystyrene, a very popular plastic, but also ABS found in your computers and SBR found in your tires. We recently announced a global partnership with Michelin, which has invested in Pyrowave and is also adopting our technology in Europe.

They will use our technology to move to the 21st century and make renewable styrene monomer from waste using our technology, which is more efficient and cleaner. The output products are identical to virgin...and that will replace fossil-based styrene in the production of synthetic rubber found in tires—all of that with the objective of being 40% sustainable by 2030 and 100% sustainable by 2050.

We also have multiple projects starting in Asia, and this certainly presents a huge opportunity for us. It also demonstrates the worldwide demand for Canadian-themed technologies.

[*Translation*]

Canada is a leader in clean technology development. Ten years ago, I personally co-founded Pyrowave, a company specializing in what we now call the circular economy of plastics. However, we have much work to do to become a leader in scaling up and exporting technologies worldwide. Having walked the path myself, I'm aware that my experience is unique.

Today, I'd like to share my vision for the gaps that will require special attention if Canada chooses to accelerate the export of Canadian clean technologies as we rebuild the economy after COVID-19.

● (1335)

[*English*]

Here are my three points, and I'll expand further on them.

First, we need to help Canadian clean-tech companies access large capital markets; second, we need to adopt carbon pricing to truly differentiate low-carbon solutions from fossil-based solutions; and third, we need to adopt policies and trade rules that will further enforce the carbon differentiation of Canadian clean technologies and create demand for them abroad.

Regarding investment opportunities, I think Canada already has an impressive portfolio of clean technologies made possible by great programs like Sustainable Development Technology Canada, from which we received very early support.

Past the demonstration stage comes commercialization, which requires a massive amount of capital and access to various investment networks. In order for Canadian companies to export and win on global markets, it's essential to secure financial strength. For that, I invite the government to develop programs to invest in clean tech to stimulate and attract investments, as well as key players into the Canadian innovation ecosystem.

In Europe, for example, clean-tech companies have strong support from the EU through grants, and various mechanisms of financing that attract private investments. If Canada wants to lead this new sector and be able to challenge these competitors, we need to bring elements to attract capital and strategic partners for Canadian companies.

Regarding carbon pricing, I think another element is putting in place a level playing field, so that low-carbon clean tech can truly exhibit its differentiation element at the financial level. For example, in 2015, the IMF issued a report that quantified the total subsidies to the fossil fuel industry. Its methodology was to report post-tax subsidies. These subsidies include pre-tax subsidies, which occur when people and businesses pay less than it costs to supply the energy. To that are added other amounts reflecting damages to the environment and health caused by the use of that energy. In other words, it represents the value that is destroyed or not captured by using this form of energy.

In that study, if we divide the total amount of subsidies by the amount of global emissions, we obtain a price of about $150 per tonne. If I use Pyrowave as an example, the difference in carbon emissions between fossil and recycled styrene monomer is basically anywhere between two to four tonnes of CO2 per tonne of styrene. In other words, by switching to recycled styrene, we reduce emissions by 2 to 4 tonnes of CO2 per tonne. By applying such carbon pricing, switching from fossil to recycled would create a cost differentiation of anywhere between $300 and $600 per tonne.

When you're a global packaging company and you buy 100,000 tonnes a year of styrene, that means you have savings of anywhere between $30 million and $60 million a year just by switching from fossil to recycled. The low-carbon differentiation element is therefore captured in the financials and justifies a switch to low-carbon products and therefore helps accelerate adoption of clean technologies.

An important point here is that I don't think carbon price should be used to finance clean tech because it would mean that you need fossil fuels to power clean technologies and therefore we're doing all of this for nothing. I think that carbon pricing is a mechanism by which clean tech can reflect its true differentiation at the financial level and drive corporate decisions toward low-carbon solutions. In other words, carbon pricing shows how much value is destroyed by not changing to low-carbon solutions.

My third point is related to policies and tariffs. Policies and tariffs can help Canadian clean technologies deploy internationally. Governments can use tariffs to benefit specific industries. It's common to see tariffs being applied when importing countries feel that some industries are unfairly subsidized. If we recognize that fossil-based products are subsidized and because their price does not represent the true cost of the good, we can make an argument that importing such goods creates an unfair advantage against products made with low-carbon technologies.

This concept is called “carbon border tax” and is being discussed right now in Europe and the U.S. It basically imposes additional costs on high-carbon imports that come from countries with inadequate climate rules. At the same time, suppliers at home can get carbon-related rebates to help boost their exports. I believe such policies like tariffs and minimum recycled contents, for example, could help companies currently using or developing clean technologies by creating opportunities for them abroad and here.

In conclusion, my vision of the problem is coloured by the experience we had navigating the ecosystem of clean technology and its positive impacts on our economic growth and job creation. Clean technologies are progress. They represent the evolution of century-old technologies. They're what the high-speed train is to the good old steam train. Who wouldn't say yes to a high-speed train today?

While we have seen tremendous progress in electronics, transportation, computers and software, there is a lot to do with industrial manufacturing that accounts for 45% of global emissions. As I said, we need to help clean technologies access a large capital market. We need to adopt carbon pricing. We need to adopt policies and trade rules that will further enforce the carbon differentiation of Canadian clean technologies here and abroad. This will create the basis of a strong sustainable economy by creating high-quality jobs here and retaining long-term value.

We've seen how rapidly this government invested in solving large problems like COVID-19. Canada can certainly support the delivery of clean technologies around the world and lead this new clean economy.

Thanks for your time and we look forward to questions.

● (1340)

The Chair: Thank you very much, Mr. Doucet.

We will move on to questions from the members.

Mr. Hoback, you have six minutes, please.

Mr. Randy Hoback (Prince Albert, CPC): Thank you, Chair, and thank you, witnesses, for being here on a nice Friday afternoon.

I'm going to start off with you, Mr. McMillan.

You started talking a little bit about how natural gas exported into the Asian market would be able to offset the coal-fired plants that are very, let's say, not friendly. Can you explain how that gives us credit here in Canada? How does that work toward our Paris climate initiatives?

Mr. Tim McMillan: Absolutely.

It's a challenge because today it can't. There's no incentive to offset the coal-fired power plant build-out around the world with Canadian natural gas. The intent of article 6 of the Paris Agreement was to put a structure in place where those credits could be shared by both parties. They could be split in half or it could be a 40-60 split. I think there are a lot of models that would make sense for the priorities of different countries, but as of today there is no benefit.

In fact, by providing more natural gas to offset coal in Asia, Canada just further puts itself behind the eight ball when it comes to meeting our commitments even though we're driving a global emissions reduction by doing it.

Until we get the incentives correct, we're going to continue to see the build-out of coal-fired power plants in countries that legitimately are trying to provide heat for the first time for some of their populations. There are over a billion people in the world who don't have access to electricity. We can look from our high tower of a wealthy nation and cast judgment, but the reality is...let's just find a better way to do it.

Mr. Randy Hoback: Then we're looking at the global emissions situation and we can actually reduce that and still be strong and providing what we do best.

When we look at our technologies and how we extract oil and gas and compare it with other regions around the world, how do we take those regulations that we now face and compare them, for example, with those in the U.S.?

Mr. Tim McMillan: That's a great question.

The U.S. is a very good comparison, because when you look at the global top 10 producers, there are two countries that stand out from the rest: Canada and the U.S.

Every other nation that is a top-10 producer does not have our capacity, technology or innovative mindsets, even the U.S. We partnered with them for a 45% reduction on methane emissions. We've now done that and we will meet that goal by 2023, but the U.S. no sooner had signed the commitment than they backed away from it.

Potentially, under the new administration in the U.S., they will play catch-up. I hope they do, but we have seen that time and again, where Canada continues to lead and we sometimes fail to see our partners follow.

Mr. Randy Hoback: We tend to be the Boy Scouts.

Mr. Wayland, you talked about the Boundary Dam. I'm from Saskatchewan, so I'm very familiar with the carbon sequestration.

Then you talked about the facility that we're building here in Saskatchewan for rare earth elements, and we're excited about that.

As I look at that, how do we take something like the Boundary Dam and actually commercialize it? That's a problem we've been facing right from day one. We have all this great innovation, all this technology, yet it seems like nobody is embracing it; it's just sitting there in Estevan and not being used.

How do you fight this argument about coal being bad when, in the situation in Boundary, coal actually has less emissions than natural gas? Can you maybe give me some information on that?

Mr. Matt Wayland: Sure, Mr. Hoback. Thank you for the question.

The Boundary Dam 3, as you mentioned, is the first of its kind of commercial size. Certainly there were some hiccups along the way. When you do the first of anything, you're going to expect that. Many of us experienced that on our first Zoom meeting and subsequent meetings.

CCS technology is looked at around the world. I know that you actually have the International CCS Knowledge Centre in Regina that has done work not only within Canada, but around the world, on reducing emissions from existing not only coal plants but other extractive industries that are heavy-resource, whether it's oil and gas, cement or even Nutrien in your home province of Saskatchewan. The technology can be used not just on electricity or coal generation, but it's a technology that can be adapted to other types of heavy carbon use.

As you know, they are able to sequester that carbon, put it into the ground. Our members built, operate and maintain that facility right through to today.

I think it's just a matter of further supports. I know the federal government and provincial government did a lot of support on that. The challenge is the cost, and maybe even the population.

I think we need to look at a Canadian solution. I don't want to raise any alarm bells here, but we need a Canadian solution to energy right across the board, and not province by province or pitting one against the other. We have a variety of energy sources right across this country. We have to embrace them and utilize them.

● (1345)

Mr. Randy Hoback: Mr. Mell, before cobalt, what other rare earths are the bottlenecks in the electric battery field? I come from Saskatchewan, and in terms of SMRs, we have nuclear. We have existing oil reserves and gas reserves. We have coal. Now, with the rare earths, development and processing here in Saskatchewan, we're already moving into the next generation.

What other areas in Canada do we need to look at that would be potential bottlenecks from seeing us having a complete menu or a completely fulfilled battery being built here in Canada?

Mr. Trent Mell: The rare earth work going on in Saskatchewan right now is fascinating. The Department of Defense in the U.S. is funding a rare earth plant in California, a project in California.

That asset in particular, that initiative in Saskatchewan, should be viewed as a potential national treasure, because that's an important component to the electric vehicle.

When you get to cobalt, if I look at the batteries or the cathode, the rarest and most expensive material in the battery is cobalt. Today, 70% of that is coming out of the DRC, and the balance is coming out of nickel operations around the world, including Voisey's Bay and Sudbury.

When you look, it's the scale-up factor. You have the EV market growing at 26% per year over the next decade. It's not just that it may be rare today, such as rare earth, but even lithium, which we can get in Ontario and I believe also in Alberta, and graphite in Quebec, and so on. We just need more of it all across the board. Copper out of B.C.—

The Chair: Thank you very much.

Mr. Randy Hoback: Just one quick question.

The Chair: Thank you very much, Mr. Hoback. I'm sorry, but there's no time. You're over time, because we were getting such a great answer, and I knew we all wanted to hear that answer.

We'll go to Mr. Sheehan, for six minutes, please.

Mr. Terry Sheehan (Sault Ste. Marie, Lib.): We're going to stick with Trent, then.

You had an excellent presentation, Trent. I really appreciate what you're doing here in northern Ontario, and also across Canada and the world. You're leading the way.

You gave three different recommendations: partnering, picking winners and acting now. I had the pleasure of making that announcement for the $5 million loan from FedNor. We partnered with the province to partner with the private sector to leverage that $80 million.

For the record, could you use that as an example for the committee of what kinds of jobs that's supporting now, what kinds of jobs that will develop, and any other economic benefits with what you're doing with cobalt, as an example?

Mr. Trent Mell: Thank you for that question, Mr. Sheehan. It's good to see you again.

If I go back to the day of that announcement, as a start-up in the Canadian market, it's hard. Capital formation is difficult. That's why I said, “Pick winners”, because there are a lot of wannabes. When I started this company four years ago, there were probably 50 different cobalt companies vying for attention in the market. We just came out of a bear market, and there are only two or three of us left, perhaps.

That announcement allowed us to triple our stock market valuation overnight. That $5 million federal contribution and the $5 million from Ontario led to another $16 million of almost immediate investments in the company thereafter. That kind of collaboration does have an multiplier effect. What it means for us is that we were able to get going a lot faster, frankly, and keep on schedule. When I say go faster, it's to keep to the target we had originally set out, which is to start producing in October 2022.

We have a small local crew that's gearing up. Once we're operating, we're looking at roughly 45 full-time jobs. These are good-paying jobs. It's not like a mining operation—you're there five or 10 years and gone. The Port Colborne refinery that Vale owns has been around 100 years. However, these are long-term and really good-quality jobs. It may not be a lot, but strategically important to the supply chain.

Indirectly, what's the multiplier effect of that? You're going to get at least one to one and a half jobs for every job at the refinery. We have indigenous engagement and ongoing discussions. With construction, we have another 100 jobs or so. For an area like Temiskaming Shores, this is a pretty important driver of economic activity.

● (1350)

Mr. Terry Sheehan: I appreciate that very much.

For those kinds of jobs requiring talent, is it challenging finding the workers to fill those kinds of jobs in the clean-tech industry?

I'm going to go to Trent, and then, of course, I'm going to go to Matt afterwards with some questions about the trades and being able to work in the clean-tech field.

I'm going to start with you, Trent, and then go to Matt with some questions about the talent that is needed.

Mr. Trent Mell: Thank you, and I'll be brief.

The answer, really, is no. With our mining sector, and the process experience we have in Sudbury, along with a lot of gold mills, we have the millwrights, the electricians, and the maintenance personnel that we need. We have a lot of the foundations there.

Now we're talking about a chemical process, and we're building to spec, right? We're building for a GM battery or a Tesla battery, and so understanding the flowsheet and getting that right is important. There are important hydrometallurgical skill sets. Fortunately, with our long history of mining and processing, the pool is there for us.

Mr. Terry Sheehan: I appreciate that.

Matt, you talked about a smart grid. In my home riding of Sault Ste. Marie, the provincial government just green lit a smart grid. This will be the first of its kind, I'm told, in Canada, and the federal government is investing about $11.8 million.

I know there are jobs for construction maintenance, electricians, industrial electricians and whatnot, but is there very specific work being done on green apprenticeships, if you will, or anything like that, Matt? Please fill us in.

Mr. Matt Wayland: Certainly.

As I mentioned with regard to our electricians and construction maintenance, electricity and technology has changed over time. We've made investments in our training centres right across this country.

As Trent mentioned, there are electricians. Our members work in the Sudbury area and in Timiskaming. They not only build and maintain those factories, but they come in for training and upgrading of skills on a consistent basis.

As we bring new apprentices into the system, whether they are as a result of grants through the federal or provincial governments, or through employers, we work very closely with our employer partners, and actually train to meet the demand those employers require. Whether it's on the construction maintenance side or on the utilities side—which Ross can comment on—we are training workers not for the jobs of yesterday but to understand the technology from the past, and apply it as things change in ever-changing markets.

Mr. Terry Sheehan: Thank you very much.

Ross, do you have anything to add?

Mr. Ross Galbraith (International Representative, International Brotherhood of Electrical Workers): Yes, I would say that the electricity human resources council did a study recently looking at the needs in the electrical industry across Canada. One area of concern is that many people will be retiring from these types of occupations in the coming years. Whether they are power line technicians, line workers who are currently in the industry or other technical occupations, electrical instrumentation control technicians, power assistant technicians or information technology technicians, I think that when we look at the future, there's going to be an increased competition for these types of jobs. It won't just be the electrical industry competing for these people, but all sorts of high-tech industry, which is the direction we're headed in.

I think that an area of concern and of opportunity is to increase support for people who want to enter these occupations, who want to complete—not only the skilled trades, but also digital technology and other types of technology—and to ensure that these occupations are open to all people in Canada, no matter what gender they are or whether they're new Canadians or immigrants.

Mr. Terry Sheehan: Thank you very much.

Judy, how much more time do I have?

I think the chair is on mute. I'll take advantage of this.

Back to Trent, we talked about the financial part. You talked about specific policies. Is there one policy in general that you think would really move the yardstick? If you had the ability to enact a policy, what would it be, Trent?

Mr. Trent Mell: When I originally thought of this joint program, we were looking at a loan guarantee. As a taxpayer, I said, “I don't need a handout; I'm happy to pay it back.” There wasn't an envelope. There wasn't a practice. The hardest thing for me was where do I go? In the government, everybody thought it was a great idea. How do you get there? That really ties to finance.

I guess it really is the permitting regime. It just takes so long to permit anything in Canada. It just feels like you're almost—I don't want to be controversial here in saying—guilty until proven innocent.

We all have the best of intentions. I think we've been very fortunate with the Province of Ontario, which has really fast-tracked our project and dedicated us to their one-window process, but with 20 years of experience in permitting—and it's not just Canada—that's always the big hurdle, when you have to wait a whole year before you can get your permits and even get going when the world is changing around you.

● (1355)

The Chair: Thank you very much.

We'll go on to Monsieur Savard-Tremblay for six minutes, please.

[*Translation*]

Mr. Simon-Pierre Savard-Tremblay: Thank you, Madam Chair.

My thanks to all the witnesses for their presentations.

I will be talking to Mr. Doucet of Pyrowave.

My colleague and whip, Claude DeBellefeuille, who is your member of Parliament, absolutely wanted to send her regards. She is very proud of the success you have experienced in her constituency.

People are talking about you, in part because of the number of partnerships you have formed. You are a link in a chain leading to innovation in the plastics industry. You are working with Michelin, and Japanese businessmen visited you recently, if I am not mistaken. So things are going well there.

Canada is aiming for the national goal of zero plastic waste in the short term.

Could that impact that export chain?

Mr. Jocelyn Doucet: Thank you for the question.

The plastics problem is a global issue. Three hundred million tons of plastic are consumed around the world each year, and that consumption is projected to triple by 2050. We see that as an opportunity. If global demand triples for all sorts of reasons, whether it's transportation, food storage, or all the uses of plastic we are familiar with, there will certainly be opportunities to use innovative technologies that produce plastics with a reduced carbon footprint.

The real problem with plastics comes at the end of their life. This is where we are positioning ourselves by offering a technological solution that allows people to reuse plastics in the same way. As to whether plastics are being properly used, we leave that question to the plastics industry. We provide a solution to the end-of-life issue for plastics, which is universal. Plastics are a problem worldwide, and we see it as an international opportunity.

Canada has developed a tremendous amount of technological expertise in circular economy businesses through the federal sustainable development strategy, as I mentioned, but also through all sorts of provincial programs. These technologies are now ready to be commercialized.

On the other hand, in my presentation, I did raise some of the factors that are making it difficult to adopt these technologies. People are starting to use these technologies, but only where policies on carbon pricing and recycled content are in place. That's what Canada should be looking at, and that's what I wanted to share with the committee this afternoon.

Mr. Simon-Pierre Savard-Tremblay: I have a question I really like to ask to get a sense of the global picture. You are starting to get a good sense of it yourself, with the partnerships that you have. Michelin has an agreement with you and Japanese businessmen are interested in you. The question is:

Are there other companies around the world in a similar niche?

It's always interesting for us to know how much of an actual niche our companies have internationally.

Are you going to tell me, for example, that a thousand other similar companies exist around the globe?

Mr. Jocelyn Doucet: We don't have much competition. The field is just defining itself and rolling out. As I was saying, about 15 years ago, Canada had the foresight early on to invest in new businesses similar to ours, saying that this was going to become an area of interest. So we don't have a lot of competition.

However, going back to my first point, we see that the competitors who do exist have access to inordinate amounts of capital. There are several examples in the United States. They have been fairly inactive for a while, but recently we've seen a number of transactions. Some competitors that are far less advanced in their innovation process than we are, or have technologies with very little innovative intellectual property, have access to hundreds of millions of dollars of capital. That may not mean that the best one will win. It will be the one with the most money.

That's why we need to develop a strategy at home to attract capital and partners, but also to provide access to networks that can penetrate those sources of capital, to give Canadian technology companies the means to achieve their ambitions.

● (1400)

Mr. Simon-Pierre Savard-Tremblay: In other words, you have the innovation and the good ideas, but you need to have the means to achieve your ambitions. That takes money and the right programs.

Do you have a concrete suggestion?

Have you ever asked for help and not been able to get adequate support?

In other words, what can we do for you? What adjustments can we make?

What more can we do for innovative companies like yours, which certainly have something to contribute to the world, as you are demonstrating, and are often very unique?

Mr. Jocelyn Doucet: We can look at what's being done elsewhere, in Europe, Asia and the United States. I can give you some examples.

As Mr. Mell was saying earlier, it's not really about giving us grants. We don't mind at all getting help to leverage the funds loaned to us or invested in our business. That's what they do in Europe and the U.S. through municipal green bonds.

For example, one of our U.S. competitors received about $250 million in municipal green bonds, which allowed them to carry out an initial public offering for over $1.5 billion. So it's not necessarily a matter of giving money, but of knowing how to use it to create value and make the businesses attractive. When they have access to sufficient capital, they will be able to attract partners, and those partners will decide to invest in Pyrowave or in other companies that have the means to carry out their business plan. The key is to demonstrate that you can carry out your business plan. However ambitious it may be, you have to have the means to carry it out.

[*English*]

The Chair: Thank you very much, Mr. Doucet.

We'll move on to Mr. Blaikie, for six minutes, please.

Mr. Daniel Blaikie (Elmwood—Transcona, NDP): Thank you very much, Madam Chair, and thank you to all of our witnesses for taking time to testify here today.

I want to extend a special welcome to Mr. Galbraith and Mr. Wayland. They are fellow members of the IBEW, and I'm very happy to have them here at committee today.

I want to zero in on the question of how the transition to a lower-carbon economy can help workers across the country create opportunities for employment—particularly in Alberta, where they have faced significant job losses—and for transferring the skills and experience they have from the oil and gas sector to some of the new, emerging technologies that Canada ought to be a global leader in.

I wonder if you could talk, from a worker's perspective, about what investing in these clean technologies can look like, and the kinds of employment opportunities they can afford for those workers.

Mr. Matt Wayland: Thank you for the question, Mr. Blaikie.

Certainly that is what needs to be first and foremost, namely, looking at a just transition. As technology changes and as we look at different sources of generation and decarbonizing, we need to make sure that workers aren't left behind. That is certainly near and dear to the heart of the IBEW and many of the other trade unions. It's around training and making sure that the conversations are happening now instead of as an afterthought.

I was part of the just transition task force for coal communities and coal workers. That transition happened in some places—like you've mentioned, in Alberta—almost overnight for changing from coal generation to natural gas. Before the task force basically started, workers who had been in the industry for a long time were being handed layoff slips. These are generations of workers who relied on a stable job, whether it's in the coal sector or oil and gas sector.

We need to have those conversations as a country to make sure supports are there for them. If they're close to retirement, can we bridge them to retirement? If they are my age or younger, how do we make sure they get the training that is needed to get them into the changing sector, like clean technology? Certainly within the building trades and the IBEW we have the training centres to bring these workers in. Outside of that, we train workers that are non-union as well, to ensure that they meet the highest standards for the industry.

As I said before, with the demand for what contractors or clients need, as technology changes we have to stay up-to-date and make sure we're competitive, so our members and workers in the industry have the opportunity to stay up with that technology and receive the first and foremost training to be on the cutting edge. We need to make sure that we're leading the pack and not following behind.

Supports for workers—whether at the community level, but also the federal and provincial level—really are key to making sure that they're not left behind, wondering what happened to them and then their families and those communities are suffering. We need to have a proactive and, really, a Canadian approach to make sure that everyone has an opportunity at these technology jobs in the clean tech sector.

● (1405)

Mr. Daniel Blaikie: When we talk about a proactive Canadian approach, one thing we've heard at this committee many times in the context of many studies, including what Canada's global trade position can and should be coming out of the global pandemic, is that Canada, unlike many of our allies, has had a very hands-off or laissez-faire approach to economic planning. When you talk about industrial planning, that's where you get companies and unions—people who represent workers—at the table with government to come up with a plan for what kinds of public investments might be made and also how you coordinate training a workforce at the same time. It's the planning for how you look out for the interests of various communities and make sure that value-added work is being done in Canada and that Canadians are being compensated fairly for that work when they do it.

I think somebody earlier mentioned something about picking winners, in a positive way. Often, that's used as a pejorative term. I think what's really at the heart of the matter is good industrial planning. I wonder if you could speak to the importance of that as the world economy is in transition.

Mr. Matt Wayland: Certainly.

You did mention the earlier question for Mr. Mell on whether you have the workforce to be able to mine the cobalt. For Tim McMillan at CAPP, they're still going to need oil and gas workers. They're not shutting the taps off right now. We need to make sure there's that expertise keeping that oil and gas sector and that mining sector going, but also working towards these new technologies.

An industrial plan, like you said, has to include workers. It has to include training and not just assume that they have the knowledge to go from one to the other, but to be able to have a plan ahead of time and invest in training centres. Invest and make sure that these programs we offer, whether it's EV training on insulation of electrical vehicles.... In Joe Biden's address down in the United States, when he talked about EV's, he talked about jobs for IBEW members specifically because we are the first and foremost trusted brand when it comes to electricians.

It's going to those known commodities such as us and others that are able to provide a workforce, upskill that workforce and making sure that when start-ups need skilled workers—whether it's to build something or build, maintain and operate it—we have it there. They're not waiting, having built it, but then not having the workers.

The Chair: Thank you very much, Mr. Blaikie.

Welcome to our committee, Mrs. Stubbs. You have five minutes.

Mrs. Shannon Stubbs (Lakeland, CPC): Thanks, Chair. I appreciate that. I'm happy to be here.

Thank you to all of the witnesses for giving their time to us today. I certainly agree with a comment that Matt made earlier about Canada's economic advantage, really being invested in the diversity of energy, resources and mineral resources that we have in every province in the country. Certainly, I think governments should take a “both-and” approach rather than an either-or approach. The success of all of these industries is inextricably linked. That is perhaps no more the case when it comes to the oil and gas sector and innovation in clean tech.

Tim McMillan. I just wonder, first of all, if you want to sort of set the facts straight when it comes to so-called subsidies for the oil and gas sector in the Canadian context. Then also maybe you could expand on the reality, which is that of course among private sector investors in Canada, annually, consistently, the biggest investors are the oil and gas, oil sands and pipeline companies in Canada. Therefore, this is inextricably linked to ambition and aspiration.

Mr. Tim McMillan: Certainly.

Starting with the subsidies question, over the last several years I think there has been a lot of good work done on it, and there's been a lot of very questionable work done as well. We have seen a large aggregation of related and unrelated costs grouped together, which is called a “subsidy”. I think there are very legitimate fossil fuel subsidies in countries where they're subsidizing consumption. In Venezuela, for example, gasoline is subsidized by the government for its citizens.

In Canada, traditionally, we have contributed about $16 billion to $20 billion dollars a year to all levels of government, and the arguments in Canada have ranged from the taxation policy to the royalty policy. I've even seen studies that calculate the cost of road building and maintenance as a subsidy for the energy industry.

Historically, we have a very strong track record. That said, some of the policies that are currently being put forward would position all industries very differently from what we're seeing in competitive jurisdictions. We've seen in some of our climate policies, energy-intensive, trade-exposed protections, but if we look at this most recent budget, there is some very deliberate funding in there and tax credits for carbon capture and storage. That is something that isn't going to happen in Venezuela, Nigeria or Saudi Arabia. It's only going to happen in Canada.

To put the Canadian industry on a level playing field with the other eight—I'm not going to include the U.S., because they're an evolving jurisdiction—there needs to be either an acknowledgement that we're going to import our oil and natural gas from jurisdictions like Nigeria and Saudi Arabia or that we're going to level the playing field through federal stimulus and innovation dollars.

I guess there are really two sides to that coin. We are large contributors to the national economy and to the governments. On the subsidy question, we're contributors, not takers. That said, where government policy now positions Canada very differently than the global market, we are seeing and will need to see substantial federal balancing.

On the investment side, yes, we are usually, traditionally, the largest investor in the Canadian economy. From $80 billion a year to $27 billion this year has largely been the range over the last several decades. That amount, we think, should be ramping up dramatically as global demand is rising fairly substantially, but whether that investment comes to Canada or goes somewhere else is what I think we need to be focused on as a nation.

● (1410)

Mrs. Shannon Stubbs: I'm probably close to being out of time, Chair.

The Chair: Yes, you are. Thank you. I'm sorry, Ms. Stubbs.

We're on to Mr. Arya for five minutes, please.

Mr. Chandra Arya (Nepean, Lib.): Thank you, Madam Chair.

The trillion-dollar transportation sector is going towards battery-operated electric vehicles. I'm so glad Mr. Trent Mell is here. The cost of batteries has been coming down. I think in 2010 it was around $1,100 per kilowatt hour, which came down to about $137, if I'm not wrong, in 2020. In another two years it will be about $100 per kilowatt hour. With that, the cost of electric vehicles will be very comparable with gasoline-operated vehicles. This trend is irreversible. It is happening very fast elsewhere in the world—in China and Europe. Canada and the U.S. have lagged behind; however, we have woken up now.

Madam Chair, you may not know that the U.S. Department of Commerce held a closed-door meeting of miners and battery manufacturers about six or eight weeks back to discuss ways to boost boosting Canadian production of EV materials. I hope Mr. Trent Mell was part of this very critical meeting.

It's also a national security issue. About 13 of the 35 minerals deemed critical for national defence are in Canada—13 of 35 critical minerals. Recently, Canada and the U.S. have agreed to sign a joint action plan on critical mineral collaboration. In the budget we have investments to create a critical battery minerals centre of excellence at National Resources Canada, and we have also funded the research and development of mineral processing and refining expertise.

Mr. Mell, I'm so glad you're here. I know cobalt is very important for batteries. I know a lot of research and innovation is going toward batteries to eliminate cobalt because of the high cost. Lithium ion batteries without cobalt are being tried and developed. Of course, the solid-state batteries are coming in. Even with all that, we know that cobalt is a critical element: 70% of the cobalt is manufactured in Congo, and we need North American producers like First Cobalt. We're the only refiners on the continent that are very active.

Mr. Mell, I completely agree with you on the need for partnering with the industry, picking the winners and acting now. For some time, I have been calling for a very comprehensive strategy so that we can look at mineral and technological development for the manufacturing of batteries, everything as a pan-Canadian approach jointly on that.

You rightly pointed out, although you did not emphasize more, the critical nature of the permit regime now. I think it has to change. I think we have to approach these issues of battery manufacturing. It is an emergency. If North America has to take care of its energy storage and its transportation security, I think we have to approach this as an emergency issue in developing the minerals to the chemicals, to the manufacturing of batteries.

Mr. Mell, can you tell me what kinds of things the federal government or the provincial government should do first to reduce the time required for developers like you, from the conceptualization stage to the actual operating stage?

● (1415)

Mr. Trent Mell: Thank you. That was an excellent summary, by the way, of the industry I'm in. I can't disagree with anything you said. I've had the pleasure of going to the White House a couple of times to discuss some of these very issues on cobalt and national security.

What I find fascinating here by way of an opportunity is that we have an auto industry, we have a mining industry, but it's this midsection we're talking about, the chemical processing. It's not just the chemical processing that we're in; it's then the beneficiation of those chemicals into a precursor, and into a cathode, before it gets into the cell. These billion-dollar investments—$2.5 billion for SK in Georgia, $2.3 billion with GM and LG in Tennessee—are still at the assembly level. They're building cells. They're building battery packs. The window is still there for us.

I think your approach, sir, of collaboration is an important one. I think it's going to take some big players. I think we need to open our doors to foreign investors. The players like us that are coming in and starting the train, if you will, do need some bigger shoes to help us out, to try to connect that work. That's where I would start.

In terms of the permitting process—and I did it in B.C. with the Kemess mine, and now I'm doing it with the refinery—this idea of a one-window where, as an industry person, my team gets to interface with a point person, is really helpful, because we can't navigate very well.

Thank you for the question.

The Chair: Thank you very much.

We'll go on to Mr. Savard-Tremblay for two and a half minutes, please.

[*Translation*]

Mr. Simon-Pierre Savard-Tremblay: Thank you, Madam Chair.

Mr. Wayland, you mentioned that we are missing the boat on the energy shift that seems to be happening in the world right now, or at least needs to happen.

Why are we seeing these fears? How might we take advantage of the opportunities out there?

[*English*]

Mr. Matt Wayland: Thank you for the question. I'm going to pass it over to my colleague, Mr. Galbraith.

Mr. Ross Galbraith: Thank you.

I think an important thing is to be first to market with a lot of these technologies. My expertise is in the area of nuclear. I represent folks at a nuclear power plant. I think about when Canada was successful in days past at exporting CANDU technology to several countries around the world. There are other competing technologies. I think that right now, with the development of small modular reactors, those countries that can first develop some of this technology, demonstrate it, and put it in use and sell it will become the standard.

I think there are opportunities for two, three, four or five different designs for different purposes. One might be on-grid electrification; and one might be for remote use, for example, in the Canadian Arctic or in other areas of the world. I think we are perfectly positioned, because the Canadian Nuclear Safety Commission has already developed the regulatory regime that allows this type of development. We have sites in Canada, in New Brunswick and Ontario, and the Chalk River Canadian Nuclear Laboratories are prepared to demonstrate this technology. I think that when we build the first of the kinds, Canada's reputation in the nuclear industry will allow us to sell this.

The whole idea of these small modular reactors is that they will be part of a fleet. You won't just build a single reactor. The idea is that you manufacture them here, and you'll be able to sell 40, 50 or 100 of them. That's what really makes the economics work.

I think that for the people who can get to the market first, demonstrate it and sell it, it is an enormous opportunity. If Russia or other countries around the world get there first and their technology becomes the prevalent one, we will lose that opportunity.

Thank you.

● (1420)

[*Translation*]

Mr. Simon-Pierre Savard-Tremblay: Thank you for your answer.

[*English*]

The Chair: We go to Mr. Blaikie for two and a half minutes, please.

Mr. Daniel Blaikie: Thank you very much.

Mr. Mell, I want to follow up with you. We talked a little bit about what industrial planning might look like. For your industry, I'm wondering what you think.... If there's going to be a plan for the manufacture of EV batteries in Canada, we want to make sure that we're not just doing the mining here, but that we're doing value-added work in Canada.

What are some of the things you'd like to see as pillars of a strategy that would be mindful of workers in the industry, indigenous communities that may be the site for some of the mining, as well as companies like your own that are leaders in the field? What do you think government ought to be doing to bring all of those people together, and what are some of the pillars for a real plan that Canada can unfold over the next decade and more?

Mr. Trent Mell: Thank you for that excellent question, Mr. Blaikie. It's an excellent question.

For our refinery work, we're taking cobalt.... In fact, cobalt is not even produced in North America yet. That will come. We're taking cobalt from abroad, bringing it into Canada and creating the first supply of cobalt in North America. Then we have to put it in a battery. That chemical process doesn't yet exist, by and large, in North America. In year one, when we start producing, we hope that we will be maybe a year ahead of a bigger supply chain, and we hope that supply chain develops on this side of the border. In year one, we may be shipping a lot of our product to Europe. Some of it may go to Korea or Japan, where the install capacity is for the chemical process, the cathode-active material process.

There's a lot of discussion going on. I know at the federal and provincial level there is a lot of hope that we'll get the battery makers here in Canada. To me, from the policy side—and I think this is being done by your staff—it's important to try to connect those dots from where it's mined to where we sell our vehicle and to see where those gaps are.

I think that with the new administration in the U.S., we have maybe a little more competition than we did a year ago. I'd suggest that maybe we just have to move swiftly and bring all of together. We can have those discussions.

Mr. Daniel Blaikie: So that table—

The Chair: You have 30 seconds, Mr. Blaikie.

Mr. Daniel Blaikie: —hasn't been convened so far in Canada.

Mr. Trent Mell: NRCAN has done a really good job at doing that.

The auto supply chain that I'm talking with, the battery makers and the OEMs, are really focused on it. COVID really underlined the dangers of a global supply chain interruption and what that could mean. Onshoring is real. It's not just government, but industry as well that wants to see that.

Mr. Daniel Blaikie: So there is a moment of opportunity here to get people at the table and figure out a plan.

Mr. Trent Mell: I believe so, yes.

Mr. Daniel Blaikie: Thank you.

The Chair: Thank you very much, Mr. Blaikie.

Mr. Lobb, you have five minutes, please.

Mr. Ben Lobb (Huron—Bruce, CPC): Thank you, Madam Chair.

It's great to be here today. Welcome to all the guests.

Mr. Mell, I'm trying to get my head wrapped around something here about the entire EV sector. Let's use the example of LG, who'll be dealing with GM. Do they have a system—they'd be tier one to GM—where they would go to your facility and do an A to Z assessment of your facility to get an idea of emissions, etc., or your footprint, so that when they present it to GM and the public, they can say, okay, we've gone right up to northern Ontario, we're in Tennessee now, and here's what it is?

Does that discussion happen, or will it happen?

Mr. Trent Mell: That's an excellent question. I would say in many respects it does happen. I haven't talked about this yet for lack of time, but one of our really important competitive advantages in Canada is our energy grid. Our stated mandate is to produce the cleanest source of cobalt in the world and the most sustainable. That's the supply chain as well as our footprint. Our global greenhouse gas emissions for production will be half that of our Chinese peers. That matters to GM and that matters to LG Chem. We're all producing these sustainability reports for ESG investors showing that the zero-emission vehicle also has a low footprint to get to market.

So yes, that's part of it. With ESG I think Canada knocks it out of the park. The second part is qualifying the product. Yes, there would ultimately be a plant visit. Initially it's just a request to send your specs and send your product so that we can test it in our battery. It's not like just selling copper or gold into the international market.

● (1425)

Mr. Ben Lobb: I know it's been covered already, but it appears that cobalt is not the favourite mineral amongst manufacturers. Is this something we're looking at, that within 10 years you won't find cobalt in an EV battery for a car?

Mr. Trent Mell: We're going to see less of it. The prevalent cathode is the nickel-cobalt manganese cathode. Where at one time, going back five years, about a third of the material was cobalt, now we're down to a point where we're somewhere closer to 10%. Tesla would be down to 5%. You might see that go to 3% or 4%. It's hard to take it out, because nickel gives you range and gives you energy density, but you need the cobalt to preserve the battery integrity to keep it from overheating and catching fire and also to preserve that battery so that you get your 10-year life.

With the people I'm talking to, when you hear executives talk about a cobalt-free battery, they're not cobalt-free. They're low cobalt. It just sounds good to say no cobalt.

Mr. Ben Lobb: This study has to do with exports and the opportunities there. I can see the opportunities, but I look at it and say we know what we have with diesel engines and we know what we have with gasoline engines. But with this refinery that you built, the amount of fresh water used, for example.... I think 100 million litres a month would be used for this process.

How do companies like Tesla and GM, who want to be good corporate citizens, look at this fresh water that will be circulated through Temiscaming? How does that work?

Mr. Trent Mell: We did a life-cycle assessment of our environment. On water consumption, in fact we return more to the environment than we take. Obviously, we're meeting provincial guidelines. There are no tailings. We're not capturing this water anywhere. We're using it in our process. We're returning it back to nature—in a cleaner state, frankly, than when it comes into our pipe.

Water stress is something that you care about when you're in the Chicama desert and other parts of the world. In Canada we're blessed with a lot of water. You're able to use that process water to lower impacts in other ways. It is part of an assessment of what we call your emissions and your life-cycle impact, but I think the real focus for us, as a chemical process, is emissions. We don't have a big stack. We don't have almost any exhaust going out into the environment. From a holistic perspective, ours is one of the cleanest refineries—it might be the cleanest—in the world on the cobalt side.

Mr. Ben Lobb: Mr. Doucet, what's the biggest opportunity you folks have in your export markets? I hear different reports on CNBC where cardboard makers are having record years for production for online shopping and shipping and so forth. I guess some of your products would likely work their way in there. What is the biggest opportunity abroad that you see for your company?

The Chair: Please give a brief answer, if possible, Mr. Doucet.

Mr. Jocelyn Doucet: Look at Europe, for example. They have commitments where they have to fill up some minimum recycled content in virgin products in the plastics industry. So these regulations are driving demand for technologies like ours to be able to provide low-carbon recycled plastic substitutes. This is what we see in these markets. This is what we see in some Asian markets as well, and that's why we thought that driving some policies in that sense would reinforce the position of Canadian clean technologies, especially in our sector.

The Chair: Thank you, Mr. Doucet.

We'll move on to Mr. Dhaliwal for five minutes, please.

Mr. Sukh Dhaliwal (Surrey—Newton, Lib.): Thank you, Madam Chair. I want to thank all the presenters.

My first two questions are for Mr. McMillan.

Mr. McMillan, I'm going to be very short in my speech, and you'll have all the time you need.

First, because your association invested over a billion dollars over the last year, I would like to see, particularly LNG play a key role. I would like to see how oil and gas can play a role in a green recovery.

Second, I was travelling to Taiwan and Asia before COVID, and I noticed that there's going to be a big demand for LNG. Could you also touch on those markets in Asia, and the environmental impacts?

Third, on the Burnaby outfit that you have with your associate member who is into the co-processing of low-carbon fuels, could you explain that?

● (1430)

Mr. Tim McMillan: Certainly.

I guess, on the LNG and the role it will play in the low-carbon future, British Columbia is uniquely positioned globally. If we just start with the raw product, natural gas, and the way it's produced in B.C. and northeast Alberta, it is extremely low carbon and low methane. Put on top of that the substantial reductions, the 45% reductions, that we're making in methane emissions by 2023. Nowhere else in the world is doing that.

The fact that we can electrify our upstream and have already started to do that.... Some of the major midstream infrastructure that's been built in British Columbia, in northeast B.C., in the last several years has been electrified. Hence, as opposed to using the natural gas to drive the turbines to compress the products and move them in the pipeline, they're using electricity. With the build out of the hydroelectric dams in British Columbia right now, those opportunities get even bigger.

The current LNG facility under construction isn't fully electrified, but it is using substantial amounts of electrification. More of that can be done, but at the end of all of these pieces, and with the close shipping distance from northwest B.C. to the major markets of India, Taiwan, China and Japan, again, it positions a lower-carbon product than any LNG in the world.

You can take that and compare it with any natural gas to coal-fired power plants in Asia, where there are several hundred coal-fired power plants under construction. We have to displace that. That is the simplest, easiest carbon reduction we can do globally. The biggest impact Canada can have is by enabling more Canadian natural gas to offset that coal-fired build out. This isn't a question of people who want to have bigger houses and two refrigerators. It's people who want their first small refrigerator. It's the first time they have the ability to turn a light on in the evening so that their kid can do their homework. These are very basic needs that are today being met far too often by coal.

To your second question, what does that market look like? It is great. The International Energy Agency predicts that the demand for both oil and gas will get back to record levels by 2023 and that natural gas will grow by, I believe, 30% between 2023 and 2040. There are a billion people who today don't have a light bulb, and we over the last decade have done the best job of pulling people out of poverty that we've ever done in history, and we're set up to do an even better job in the decades ahead, but that takes energy.

I think that the more of that energy that comes from Canada, the better environment we'll have globally. Clearing the barriers is going to be a huge benefit for us if we can achieve it.

I'm sorry, could you repeat your third question?

Mr. Sukh Dhaliwal: You have an associate member that processes biodiesel feedstocks such as canola oil and animal fat in Burnaby. Are you familiar with that? If not, it's okay.

Mr. Tim McMillan: Off the top of my head, no. We have associate members who are into ethanol and all sorts of products, as well as several members who are investing in other technologies. I don't know that one in particular. Sorry.

Mr. Sukh Dhaliwal: That's no problem.

Thank you.

The Chair: Thank you, Mr. Dhaliwal.

We go now to Mrs. Gray for five minutes, please.

Mrs. Tracy Gray (Kelowna—Lake Country, CPC): Thank you, Madam Chair, and thank you to all of the witnesses for being here today.

I'd like to start off with some questions for Mr. Mell.

You had mentioned huge opportunities for Canadian cobalt resources in battery production and actually in the entire value chain. You mentioned that 80% of cobalt currently comes from China. Would you think that Canadian cobalt would be seen as a more desirable product due to our higher environmental and human rights standards?

Mr. Trent Mell: Absolutely. Thank you, that's a very good question.

Right now in the supply chain, cobalt comes out of essentially nickel and copper mines. From the nickel operations, whether they are here in Canada, Australia, Russia or Indonesia, a lot of that ends up in the alloy market. When you're looking at batteries—just the way it's processed—it comes out of the African copper belts. That's the DRC. Seventy percent of the world's cobalt comes out of Congo. Almost all of the world's batteries require Congo. I'd liken it to the new Saudi Arabia of the EV world.

Most of that, through the belt and road initiative and direct investment, has found its way from the DRC into China where it gets refined. That's sort of where we're competing. There's Umicore out of Finland. There's soon to be First Cobalt out of Canada, and then there's China.

This is not just a geopolitical statement. It's also just the diversification of a supply chain and it's ESG, which I mentioned earlier. There are a lot of reasons why people would love to see cobalt out of Canada. We do have some assets around our refinery that we have explored. We have even more advanced assets in Idaho, but all of that could be seen as potentially a vertically integrated supply chain here on the continent.

● (1435)

Mrs. Tracy Gray: Thank you very much.

That leads to my next question. It's all tied together and I think it was a little bit of where my colleague, MP Hoback, was going to go before he ran out of time.

We hear reports of China coming into countries and controlling various infrastructures and mineral extractions. One example you just mentioned is the cobalt resources in the Democratic Republic of Congo. How do we make sure that Canadian cobalt exporters are competitive in that type of environment?

Mr. Trent Mell: From an extraction perspective, first we have to find it in decent quantities. Although Ontario certainly has some prospects, as do the north and the territories, we're just not there yet. Coming out of the mining sector, we invest with the commodity cycle. When the cobalt price is high, we'll start drilling; when it goes down, we'll stop drilling.

There is a bit of an incentive program. We do have the Canadian flow-through share regime. It is a long process from discovery to ultimate extraction. For our company, my expectation would be that we'll be producing from Idaho well ahead of any opportunities here in Canada. That's a function of geology and some work that was done in the sixties and seventies by other companies.

Mrs. Tracy Gray: Thank you.

My next question is actually for a couple of witnesses. I'll just call on Mr. Mell first, and then I'll call on a couple of other people.

We know that clean tech is an emerging industry. There's a chance that it may not be fully accounted for in some of our trade agreements when it comes to regulatory co-operation and non-tariff barriers. Have you faced any regulatory hurdles or non-tariff barriers in exporting your products?

Mr. Trent Mell: We're not yet exporting, but that's very topical right now. In fact, just this morning we were looking at some of the tax rules to import the material into Canada and then to process it. The nature of the chemical conversion and whether it's exempt or not going into various markets is alive and well.

I don't have a straight answer for you, but it's something that obviously matters to us as we look to face the market.

Mrs. Tracy Gray: Thank you.

Mr. McMillan.

Mr. Tim McMillan: Yes, I would say that's very topical for us as well and it has been for quite some time.

Some of the most obvious non-tariff barriers would be the cancellation of pipelines, both by industry and by government. Our ability to be the supplier of choice hinges on our ability to get those commodities to those markets. The northern gateway, energy east, Keystone XL, and now for Canada to be paying attention to Line 5.... If we can't get Canadian products through Line 5 to the U.S. market and back to the Canadian market, we have a very challenging logistical situation. We may have a lot of Canadians who are in very difficult situations.

Mrs. Tracy Gray: Thank you.

I think we can squeeze in Mr. Doucet if he'd like to answer that as well.

Mr. Jocelyn Doucet: We have no issues exporting our technology, especially in areas where we have free trade agreements with Europe and some countries in Asia.

With respect to exporting some of our outputs—some of the products and chemicals that we make locally here in Montreal—we go through all the regulatory standards, like the REACH standards and stuff like that, and everything is okay. We don't face any issues going outside of Canada.

The Chair: Thank you very much.

We'll go on to Mr. Sarai, for five minutes, please.

We don't have Mr. Sarai there.

Mr. Chandra Arya: Madam Chair, maybe I can take over.

The Chair: Yes, Mr. Arya. Thank you.

Mr. Chandra Arya: Mr. Mell, this gives me another chance to go at you. You mentioned the investments made by SK Innovation, General Motors and LG in battery manufacturing in the U.S.

At the last mile of battery manufacturing, there are four or five plants. Many people may not appreciate that today, in the U.S., there are about five or six battery manufacturing plants, each with investments of over $2 billion, are being implemented.

There is still a lot of potential for the supply chain, from the minerals in ground to the chemicals to processing, a vast amount of things. Most of the things that are required for battery manufacturing are still coming from China and other parts of the world.

Can you explain what are the various components of the supply chain that Canada, along with the U.S., can focus on investing in and become competitive?

● (1440)

Mr. Trent Mell: There is still room for more battery plants. Regarding those $2-billion investments, I'd like to see us get a couple of them here in Canada, and I think we can.

Just a little further upstream from that, it would be the cathode-active materials. The well-known household names would be BASF and Umicore. Those would be two great examples, and then there is precursor production as well.

At that end, just before you get it into a battery cell, you have to take all the chemicals that people like us are mining or refining and put them together into the cathode before you actually can start manufacturing the individual battery cells that go into the battery pack. That's the gap we're trying to fill. There is a bit of opportunity for us in North America, but that's where I see ourselves shipping to maybe Germany or Korea in the short term until we can fill that in.

Mr. Chandra Arya: Mr. Mell, how do you see this joint action plan of the U.S and Canada, who have agreed on this critical mineral collaboration? With your participation in the U.S. Department of Commerce meeting of miners and battery manufacturers where you discussed how to boost Canadian production of EV materials, how do you see that going?

Do you think both governments, the federal government here and the one in U.S., are speaking in the same language? Do you see any issues there? Have they agreed upon very close, positive, proactive collaboration?

Mr. Trent Mell: There is some great information-sharing, which is good to see. There is good alignment, but let's face it, we're also competing for the same investments. In fact, we're probably jointly competing now with Europe, as well as Asia.

To me, there is alignment of interests. There has been a good exchange of views. Certainly behind closed doors, where I'm not present, our company has been raised as an example of how Canada can support the U.S. in its critical mineral needs. Beyond that, it's hard to say what happens, because of course, these are a lot of confidential discussions with bigger foreign investors that we're trying to attract.

As I said, I know NRCan has been working very hard. I can say the same about their counterparts in Quebec and Ontario. I'm not privy to where it's going to go, but I'm certainly rooting for everybody.

Mr. Chandra Arya: The U.S. defense department has identified about 13 of the 35 minerals as critical, as a national security issue. Quite a number of them fall into the battery manufacturing minerals, too.

Do you think the investment we have made in Natural Resources Canada to advance critical battery minerals processing and refining expertise is too late? Do we have the expertise to develop this centre further?

Mr. Trent Mell: I don't know if we're too late. COVID-19 has hurt us a bit. NRCan used to lead trade missions into Asia. I did one or two of those and it was helpful to get in front of some of the bigger players, such as Samsung, SKI, and the like. That obviously had to fall away. I will give credit to our civil service for trying to help.

I don't know. I've sort of focused on my own plans. It was really about capital formation and permitting. The measures taken have been helpful, but in terms of the deployment of capital that is going to be required, if you want to talk about building back bigger or greener, whether in Europe or the U.S., I think Canada probably needs to do more than maybe we are comfortable doing, just in order to compete.

The Chair: Thank you very much.

Sorry, Mr. Arya; I'm trying to get everybody in here.

Monsieur Savard-Tremblay, you have two minutes.

[*Translation*]

Mr. Simon-Pierre Savard-Tremblay: Thank you, Madam Chair.

I assume these are the last two minutes before the 15-minute period we had set aside to consider the motion, which will begin at 2:45 p.m.

The Chair: Yes, that's right.

Mr. Simon-Pierre Savard-Tremblay: I would like to come back to Mr. Galbraith and Mr. Wayland.

Mr. Wayland, you have given seminars on decarbonization through electrification as a way to create jobs.

Is the focus on transition? Will some energy have to be converted?

In other words, will some industries inevitably need to be left behind, bit by bit, to accommodate the jobs and new activities in the electrical sector?

[*English*]

Mr. Matt Wayland: Certainly.

As technology changes and as energy sources change.... I'm going to use coal as an example. In Alberta, they replaced the coal generation with natural gas. It was quickly done. That was a displacement of workers. So it's about keeping up with, as those technologies change, those sources of energy change, making sure that workers have an opportunity to have that transition and they're not left behind.

As we look at emerging sources of different types of electricity, whether it's wind and solar, more efficient things like hydrogen or nuclear technology, we need to make sure that we're able to engage, have the workforce available, and that they're trained and ready to go to meet the needs of the clients, consumers and the suppliers of these products.

● (1445)

The Chair: Thank you very much, Mr. Wayland.

Mr. Blaikie, as our last speaker, you have two minutes.

Mr. Daniel Blaikie: Thank you very much.

Mr. Mell, when we talk about planning for an industry, one thing we often hear is that the many trade agreements to which Canada is a party prevent certain kinds of government action and coordinating in industry, or investing in Canadian companies, for instance.

I'm wondering if you have a sense of how the current trade picture for Canada could affect our ability to implement that kind of planning within an industry, and if you have any recommendations for how we might best ensure that those don't become barriers to moving forward in a very important industry.

Mr. Trent Mell: I think maybe having an eye to raw material inputs and how those get taxed through processing in Canada is something that I'm attuned to, because that's really going to go to our direct competitiveness.

I can never compete with my Chinese counterparts, or competitors, I suppose, on the cost of capital. It is just never going to happen, so I need every advantage I can get. We have ESG, but the tax regime on inputs...and facing out, I guess, is important as well. The markets we're going to, so far, look pretty good to us, but I am mindful of the former point.

Mr. Daniel Blaikie: I'll go over to you, Madam Chair.

Thank you.

The Chair: Thank you very much.

Thank you very much to all of our witnesses. That was very valuable testimony for this particular study that we're doing.

We have to do some committee business now, so the witnesses can excuse themselves.

I will suspend for 30 seconds while the witnesses leave the meeting.

● (1445)

_____(Pause)_____

● (1445)

The Chair: For the information of the committee, the clerk has circulated a proposal to carry us until June 7, to complete the carbon-tech study, complete our studies on ISED and GAC, and COVID-19, and so on.

Mr. Savard-Tremblay had an issue with it, as Bill C-216 was scheduled to be dealt with on June 7. He has introduced a motion that we are going to deal with now.

Mr. Savard-Tremblay, would you like to speak to the issue of Bill C-216?

[*Translation*]

Mr. Simon-Pierre Savard-Tremblay: While bills are usually passed quickly, the fact remains that our study, exciting and interesting as it is, is not a priority.

The parliamentary session will end soon, and I feel we should put considering the bill, which is very short and shouldn't take very long to consider—

[*English*]

Mr. Randeep Sarai (Surrey Centre, Lib.): I have point of order, Madam Chair.

The Chair: Just one second.

Mr. Randeep Sarai: I've been informed that we're still in public, I think. I don't know if Madam Clerk can check, but we still being aired publicly?

The Chair: Madam Clerk.

The Clerk of the Committee (Ms. Christine Lafrance): This part of the meeting is public.

The Chair: Go ahead, Mr. Savard-Tremblay.

[*Translation*]

Mr. Simon-Pierre Savard-Tremblay: Because the parliamentary session is almost over, I believe it would be useful and important to consider the bill as soon as possible. It makes sense that a bill should come before a non-urgent study.

Although that non-urgent study is fascinating, much like the one we are conducting right now, the bill is very simple and very short and we will not have to dedicate many meetings to it. One or two meetings should suffice.

Therefore, I move that we consider the bill as soon as possible. Would you like me to read the motion?

I believe it was sent to you, anyway.

● (1450)

[*English*]

The Chair: Yes, please read it.

[*Translation*]

> That the committee immediately undertake consideration of Bill C-216, An Act to amend the Department of Foreign Affairs, Trade and Development Act (supply management), referred to the committee by an order of reference on March 10, 2021, for disposition on a priority basis, and defer the study initiated by the Committee on Canadian exportation of green, clean and low-carbon technologies.

[*English*]

The Chair: Thank you very much.

I see Mr. Arya and Mr. Sheehan have their hands up.

Mr. Arya, please go ahead.

Mr. Chandra Arya: Madam Chair, while I understand the importance of what my colleague, Mr. Savard-Tremblay, states about Bill C-216, for me, it is very important that we continue with this study. We have already heard from the witnesses. Given the enormity of this particular study and its importance for Canada and the Canadian economy now, we should be going forward.

I think we should continue with this tempo. We should continue this study and hear from more witnesses, gather more information, and conclude this.

Thank you, Madam Chair.

The Chair: Thank you.

Mr. Sheehan, please go ahead.

Mr. Terry Sheehan: Thank you very much.

I think that we should continue on our path, because we only have a couple more meetings for this particular study. We've all submitted the names of some leading people in the clean, green-tech industry who have cleared their schedules and made themselves available. We've heard the testimony to act now. We must move expeditiously, so I think that behooves us to do that.

In speaking earlier in a committee business meeting, I asked the clerk about the order of precedence, and you said that there's really no order of precedence, just what we determine is important. I'm not saying that the other one is not important, but I think that we could finish this meeting expeditiously and then move forward.

Those are my comments.

The Chair: Thank you.

Mr. Blaikie, please go ahead.

Mr. Daniel Blaikie: Thank you very much.

I want to take the opportunity to express my support for the motion. It seems to me that we have about two weeks before the break week, so we might be able to move one of the sessions that we have dedicated to this study to a later date in order to be able to deal with a relatively straightforward piece of private member's business, so that it could be reported back to the House in time to perhaps be taken up in the five weeks after the constituency week in May.

It is a piece of legislation. Committees do normally prioritize legislative work. I think we can shuffle around one of the meetings in this study to be able to accommodate that, and have the bill reported back in a timely way to the House, so that it has a chance of being considered again before the House rises in June.

The Chair: Thank you very much.

Monsieur Savard-Tremblay, the floor is yours.

[*Translation*]

Mr. Simon-Pierre Savard-Tremblay: I didn't understand what you said, Madam Chair. The interpreter did not say that.

Do I have the floor?

[*English*]

The Chair: Your hand was up. Did you want to speak to the motion again before we move on with it?

[*Translation*]

Mr. Simon-Pierre Savard-Tremblay: I confess that I don't understand the argument that witnesses have prepared. It would be far more improper if a witness is not ready because we move a meeting ahead. We may ask witnesses to use the notes they have already prepared at a later date, but they are still ready to appear.

I don't understand that argument. We're not talking about cancelling the study here, we're talking about possibly deferring it one meeting. Honestly, if we ever reach a consensus, I would be inclined to suggest that we hold an additional meeting. The difference between considering the bill in early June and doing it as soon as possible is that, if we wait until early June, the session could end before the bill goes back to the House.

It is in everyone's interest to get it back to the House quickly. This is an important bill, and it deserves to be discussed. We have had farmers appear on several occasions, and we have talked about our reality on this. Out of respect for those who don't agree with the bill, we can debate and discuss it. That is what the committee is for.

The current topic under study will not lead to a bill. It is not urgent. We have absolutely no need to complete the study by the end of the parliamentary session. We are not there. We will complete it anyway. I don't feel that this study will particularly suffer from being deferred for one more meeting.

● (1455)

[*English*]

The Chair: Thank you very much, Mr. Savard-Tremblay.

Are there any further comments or discussions?

Seeing no hands up, Madam Clerk, I gather that we require a vote on this.

The Clerk: A recorded vote?

The Chair: I don't know if that's required. I don't think it's required.

Mr. Daniel Blaikie: Why don't we do a recorded vote, Madam Chair?

The Chair: Okay, that's fine.

(Motion negatived: nays 5; yeas 2 [*See Minutes of Proceedings*])

The Chair: Mr. Savard-Tremblay, I will also have a discussion with the clerk to see if it's possible to move it up a meeting—if it's possible. I will meet with the clerk to see if we can still find some way to accommodate your concerns.

Thank you all very much.

It's Friday, so have a wonderful weekend.

I'll see you on Monday.

The meeting is adjourned.