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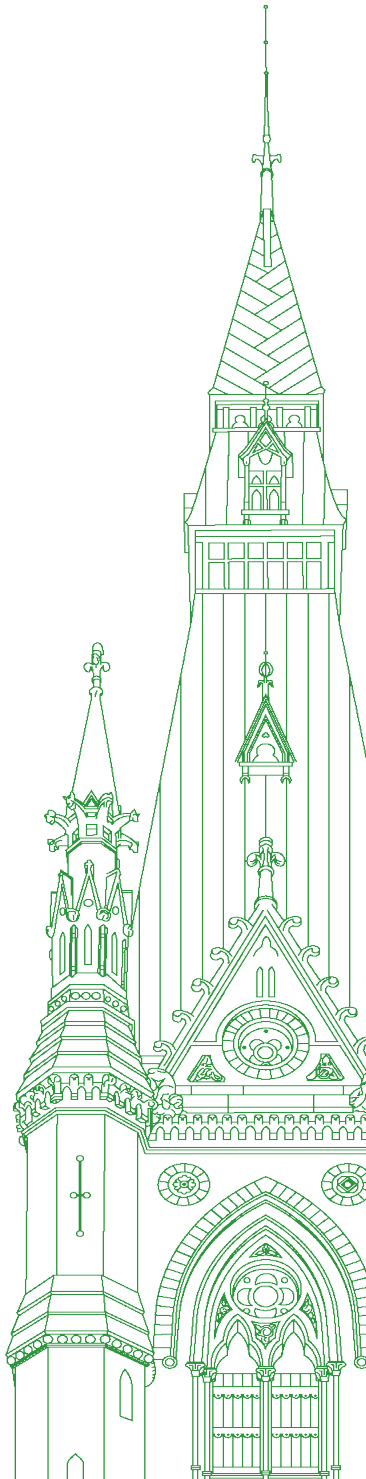

Chair: Mrs. Sherry Romanado

Standing Committee on Industry, Science and Technology

Tuesday, May 4, 2021

● (1105)

[*English*]

The Chair (Mrs. Sherry Romanado (Longueuil—Charles-LeMoyne, Lib.)): I call this meeting to order.

Welcome to meeting number 36 of the House of Commons Standing Committee on Industry, Science and Technology. Today's meeting is taking place in a hybrid format, pursuant to the House order of January 25, 2021.

The proceedings will be made available via the House of Commons website. So that you are aware, the webcast will always show the person speaking rather than the entirety of the committee.

To ensure an orderly meeting, I would like to outline a few rules to follow:

Members and witnesses may speak in the official language of their choice. Interpretation services are available for this meeting. You have the choice at the bottom of your screen of floor, English or French. Please select your preference now.

As a reminder, all comments by members and witnesses should be addressed through the chair. Before speaking, please wait until I recognize you by name. When you are not speaking, your microphone should be on mute. Please do not talk over each other, as the interpreters will not be able to capture your comments.

As is my normal practice, I will hold up a yellow card for when you have 30 seconds left in your intervention. I will hold up a red card for when your time for questions has expired. Please keep your screen in gallery view so that you can see the cards when I hold them up. We have a tight schedule today, so I will intervene if you go over time.

Pursuant to Standing Order 108(2) and the motion adopted by the committee on November 5, 2020, the House of Commons Standing Committee on Industry, Science and Technology is meeting today to continue its study on the green economic recovery from COVID-19.

I would like to welcome our witnesses.

We have from Canadians for Tax Fairness, D.T. Cochrane, economist; from Clean Energy Canada, Mr. Mark Zacharias, special adviser, and Mr. Felix Whitton, senior policy adviser; from Enerkem, Mr. Michel Chornet, executive vice-president, engineering, innovation and operations; from Whitecap Resources, Grant Fagerheim, president and chief executive officer; and from Wildlands League, Ms. Janet Sumner, executive director.

Each witness will present for five minutes, followed by rounds of questions. With that, we will start with Mr. Cochrane.

You have the floor for five minutes.

Dr. D.T. Cochrane (Economist, Canadians for Tax Fairness): Thank you for welcoming Canadians for Tax Fairness to speak on this topic.

The pandemic has taught us many lessons. Most importantly, it taught us that we are inextricably dependent on each other. Individualism is a myth.

Part of this lesson is that government is a vital institution for equitable social protection and coordination. Despite many government failures during the pandemic, no amount of market-driven, profit-seeking, private sector initiative can replace government's unique roles, especially its fiscal capabilities.

There is almost unanimous agreement that the federal government did the right thing stepping in with unprecedented levels of financial support. This spending served a dual purpose. Most importantly, it put money in the accounts of people who needed it, but it also kept the financial system from seizing up, which would have added a financial crisis on top of the health crisis.

Of course, deficit Chicken Littles are already proclaiming that the debt sky is falling. However, we just need to remember that federal deficits are non-federal surpluses. The debt is money the government spent and has not taxed back yet.

While we slowly move out of the pandemic economy, we must maintain financial supports. The recovery, like the pandemic, will be K-shaped. The government can make sure no one falls through the cracks.

Unfortunately, the pandemic is not the only crisis. We still have the climate crisis. The recovery is a chance for the federal government to take the pandemic's lessons and guide us toward a just and sustainable economy. It can use its unique fiscal capabilities to create greater certainty through decisive leadership. In the words of economist Mariana Mazzucato, we need a mission-oriented economy.

The economy of the future will not look like the economy of the past. There is growing support to wind down high-emission industries more quickly, even from workers in those industries. We should be helping workers transition with income supports, training and employment.

The government should invest in low-carbon care institutions. Budget 2021 showed that we can get creative on child care. Now, let's do the same with pharmacare, dental care, mental health care, elder care, ecological care. If these are priorities—and they should be—they need to be funded like priorities.

There is much work to be done in achieving a just transition. We have the necessary material, knowledge and labour resources, but we need the government to mobilize its financial resources. Stop trying to entice the private sector towards sustainability with tax incentives and cheap lending. If the government spends what is needed to transform existing industries and develop new ones, the private sector will follow.

Taxes have an essential role in creating a just, sustainable economy.

We commend the current government for the carbon tax, which reduces the carbon subsidy reaped by businesses in high-emission industries. However, we need to go further faster. We need a border adjustment so foreign emitters do not get preferential treatment. We need to support households and communities as they transition from dependence on artificially cheap fossil fuels which malformed our local economies.

The carbon subsidy has disproportionately benefited those at the top of our economic hierarchy. Taxes have a role to play there as well. The Biden administration is leaving behind the decades-long folly of trickle-down policies by increasing the U.S. corporate income tax rate, imposing a global minimum corporate tax rate, as well as a minimum tax on book income. Even the Conservative government in the U.K. plans to increase the corporate tax rate. We should follow their lead and then go further. End capital gains exemptions. Close loopholes. Shut down tax havens. Bring in a progressive wealth tax.

Money spent into the economy circulates, as expenditures become incomes become expenditures. However, we have a trickle-up economy. As the money circulates, portions are relentlessly siphoned off as interest and profit, which flow to asset owners. Because asset ownership is highly unequal, the rich get richer simply because they are already rich. They did not earn it. They do not need it. Worse, they use that money to gain political advantages and preferential rules.

● (1110)

Progressive tax measures reduce inequality and the illegitimate power of the wealthy. They also help to keep the money circulating. To build our just society, the government should spend money into the economy where it is useful and needed, and it should tax the money out from where it is not.

Thank you.

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

We will now go to Clean Energy Canada.

You have the floor for five minutes.

Mr. Mark Zacharias (Special Advisor, Clean Energy Canada): Good afternoon, Madam Chair and members of the committee.

My name is Mark Zacharias and I am a special adviser to Clean Energy Canada. We are a climate and clean energy think tank at Simon Fraser University. I am based in Victoria, B.C.

I'll be speaking today on how to help Canadian industries position themselves to export to markets that are increasingly concerned about climate change. Canadian industries are already well positioned for success and with some additional actions they can be the foundation of Canada's economy for decades to come.

With a combined GDP of $46 trillion U.S., 127 nations have adopted or are considering net-zero goals, meaning carbon neutrality by 2050. This list includes not only Canada, but also our largest trading partners: the U.S., the EU and China. It's not just countries that are committing to net zero. With $9 trillion U.S. in assets, 30 of the world's largest investors have pledged to move to carbon-neutral portfolios by 2050 or sooner.

The move by our closest trading partners towards a lower carbon future is a huge economic opportunity for Canada. For example, the World Bank predicts that the production of certain metals and minerals used in clean technologies could increase by nearly 500% over the next three decades. The global shift towards a net-zero future is expected to trigger what has been called a green economy supercycle, during which many of the goods Canada produces could see massive increases in demand.

Canada is well positioned to prosper in a net-zero world. Our commodity exports are as vast and varied as the country itself: aluminum, steel, wood, fertilizer, cement and minerals, some of which are already the world's cleanest thanks to Canada's electricity grid that is 83% emissions free, plus an economy-wide carbon price.

However, Canada cannot be complacent if it wishes to be competitive in a global low-carbon economy. Our competitors are already planning ahead. For example, the United Kingdom recently announced its 10-point plan for a green industrial revolution, which sets out the approach the government will take to build back better, support green jobs and accelerate their path to net zero.

President Biden's proposed American jobs plan is similar to the U.K. plan and will invest in transitioning the U.S. to a clean electricity grid that will power clean industries, buildings and transportation.

There are a number of key takeaways from the U.S., the U.K. and how other nations are transforming their economies. First, recognize that your climate plan is your economic plan. Second, don't build back to what you have; build back to what you will need. Third, act now to attract and grow the industries that will prosper in a net-zero world.

Canada's recent climate plan and budget 2021 are an excellent start. However, Canada could take the following additional steps to grow our industries and the jobs they create.

The first would be a buy clean approach in which the federal government builds infrastructure with low-carbon materials and incentivizes other levels of government to do the same, thus increasing demand for competitively clean Canadian goods. The recent greening government announcement between the U.S. and Canada is a good first step.

Second, Canada must determine which products a net-zero world will need and which of these products Canada can be competitive in supplying. It must then pursue new industries that capitalize on Canada's low-carbon advantages. A good example is establishing a self-sufficient battery and critical minerals supply chain to establish and grow domestic battery and clean-technology manufacturing.

Third, Canada must invest in research, development and deployment of clean technologies to support industries with growth prospects in a net-zero world. Canada must ensure it gets a foothold in new industries where it can lead, such as clean hydrogen, battery manufacturing and carbon removal. It must also align tax structures and incentives while encouraging private investment in clean industry.

Last, Canada needs a “clean Canada” export brand that advertises Canadian products as environmentally superior.

To summarize, Canada has tremendous opportunities to export into a net-zero world. However, Canada must recognize that the climate signal and the market signal are rapidly becoming one and the same and plan accordingly.

Thank you for the invitation to speak today. I look forward to your questions.

● (1115)

The Chair: Thank you very much.

We will now go to Monsieur Chornet.

You have the floor for five minutes.

[*Translation*]

Mr. Michel Chornet (Executive Vice-President, Engineering, Innovation and Operations, Enerkem): Thank you.

Good morning, Madam Chair, and ladies and gentlemen of the Standing Committee on Industry, Science and Technology.

Thank you for inviting me to appear before the committee.

My name is Michel Chornet, and I am Executive Vice-President, Engineering, Innovation and Operations, at Enerkem.

The theme of the economic recovery provides a unique opportunity for Canada's energy transition. First, I will say a few words about our company.

Enerkem was cofounded in 2000 by my father Esteban, an emeritus professor at the Université de Sherbrooke, and my brother Vincent. They developed and brought to commercial scale a revolutionary technology that is unique in the world. It produces advanced biofuels and renewable chemical products from biomass and nonrecyclable waste.

Our technology is a key link in a genuine circular economy. We therefore contribute to energy diversification and to the manufacture of everyday, low-carbon products. This is a sustainable alternative to burying or incinerating waste materials. While many see waste materials as garbage, we at Enerkem see them as a source of accessible, circular and inexpensive carbon.

Our headquarters are located in Montreal and we operate large-scale commercial demonstration facilities in Edmonton, Alberta, and two innovation centres at Westbury, Quebec and Edmonton, Alberta. We employ more than 250 people across Canada.

With our advanced recycling technology, we have succeeded in creating industrial partnerships in Canada and abroad, including with Suncor, NOVA Chemicals, Shell, Repsol, Proman and SUEZ.

Enerkem is founded on a business model that relies on innovation. We are developing a technology that required, and continues to require, a lot of research and development. To continue our development and to demonstrate that our technology was viable and, above all, commercially scalable, we had to secure private and public capital.

Through our plant in Edmonton, Enerkem has succeeded in demonstrating the flexibility, efficiency and maturity of our advanced recycling technology. The need to innovate never stops, however. Although the technology has reached commercial maturity, the competition is such that additional investments in innovation are required.

Canada has a unique opportunity to develop an advanced recycling model. This would keep the chemical and petrochemical industries competitive through major reductions in greenhouse gases and the creation of high-quality jobs. The Canadian model of advanced chemical recycling would be based on infrastructures already in place, such as low-carbon electricity, and on nonrecyclable waste, which is a major source of carbon.

Last December, we announced the construction of a biofuels plant in Varennes, on the Montreal's South Shore. Our group of strategic partners includes Shell, as the lead investor, Suncor, Proman and Hydro-Québec, which will supply renewable hydrogen and oxygen. We also have the support of the governments of Canada and Quebec. This C$875-million project is called Recyclage carbone Varennes.

The plant will produce a second-generation, low-carbon biofuel. It will reduce the annual production of greenhouse gases by about 170,000 tons of CO2 equivalent. In the world of waste management, Recyclage carbone Varennes' contribution will be considerable. Each year, the plant will convert more than 200,000 tons of nonrecyclable material into almost 125 million litres of biofuel. The economic impact in Quebec will be $85 million per year, not to mention 500 jobs during the construction of the plant and 100 jobs when it is operating.

The economic future looks promising. Currently, we are actually seeing a very rapid progression in the market for new-generation biofuels, because few technologies have reached maturity in making the transition.

Let's quickly look at Canada's situation in the world. In 2018, Canada was in 10th place among greenhouse gas emitters. In 2019, total gasoline sales in Canada reached 45 billion litres. Prime Minister Trudeau has committed to reducing greenhouse gas emissions by 40% to 45% by 2030. Canada has also committed to have a carbon-neutral economy by 2050.

To reach our targets, market conditions that are favourable to rolling out innovative solutions must be created.

A competitive market must be created in order to attract private investment and develop bioenergy projects. An investment tax credit could make it easier to finance companies.

Consistent support for the lifecycle of technological innovation must be assured, through the use of current programs.

The Clean Fuel Standard must be used to support Canadian innovation.

In closing, let me repeat what I said a little earlier. Canada must create favourable conditions to allow the development of innovating companies, as they will contribute directly to our economic recovery in the post-COVID-19 period.

Thank you for your attention.

● (1120)

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

[*English*]

We will now turn to Mr. Fagerheim.

You have the floor for five minutes.

Mr. Grant Fagerheim (President and Chief Executive Officer, Whitecap Resources Inc.): Thank you, everyone.

My name is Grant Fagerheim. I am the president and CEO of Whitecap Resources. Our head office is in Calgary, Alberta. Our company produces approximately 110,000 BOE per day, comprised of light oil and natural gas, and employs approximately 700 employees and consultants in field operations in Manitoba, Saskatchewan, Alberta and British Columbia.

We understand the expectations of Canadians, along with worldwide investors, that decarbonization and reducing greenhouse gas emissions are essential and we feel confident that our energy industry is moving rapidly to meet the challenge.

I sit before you as the operator of the largest carbon sequestration project in the world, located in southeast Saskatchewan. To date, we have sequestered and stored 36 million tonnes of CO2 and continue to inject approximately two million tonnes per year of CO2.

Although there are many aspirational emission targets being brought forward, we have already safely achieved a net negative emitter status, which, for clarity, means that we sequester and store more CO2 than our scope 1 and scope 2 emissions from our ongoing operations.

As we advance, the Canadian oil and natural gas sector will play a vital role in energy transition that includes global and Canadian climate change expectations. Energy transition will take time and will require a significant amount of continued innovation and technological advancement. It will not be specifically focused in any specific region in our country.

All different forms of energy are required to address the global fight against climate change, including current energy sources along with the new, emerging opportunities. A practical and measured approach is required that will provide widespread job opportunities and economic distribution across our country.

In addition to emerging technologies, including hydrogen, lithium, biofuels and renewables that we participate in to decarbonize our electricity, transportation sectors and building materials, oil and gas will continue to be essentials for decades to come.

With carbon dioxide being treated as a main contributor to climate change, we need to ensure broad and immediate implementation of carbon capture, utilization and storage technology beyond our existing projects. This can happen right now. It is well understood and recognized that light oil and natural gas reservoirs are proven to be an effective means of reliable and permanent CO2 storage, and this practice plays a significant role in combatting climate change.

CCUS from all existing sources can be very positive for Canada, making a positive impact on the environment, employment opportunities, business investment and economic growth.

We will need to further consider not only air decarbonization, but also land and water use. What's important to note is that full-cycle, cradle-to-grave environmental footprint analysis for all types of energy materials will require increased scrutiny and due diligence, something we haven't been doing to date.

We require thoughtful dialogues that include respecting and advancing the great gift of resources our country is blessed with. Post-pandemic job creation opportunities will be dependent upon our energy, environmental and economic policies.

Canada has the opportunity to continue to lead in responsible development of its resources while decarbonizing energy. Not only does a focused expansion on carbon capture utilization and storage technology help with greenhouse gas emission reductions and increased job opportunities; it also importantly links into the energy future of hydrogen development that requires even higher levels of carbon capture and sequestration.

There are many wide-reaching technical, financial, logistical and practical challenges that face our country. We must ensure that Canadian businesses in all urban and rural areas, regardless of size, can attract investment, remain competitive and have a prosperous future while meeting Canada's international greenhouse gas reduction commitments. Setting measurable near-term and long-term objectives is critical to attaining the success we want.

In closing, I recommend that the federal government's carbon capture, utilization and storage federal tax credits be expanded to include all CCUS projects in the tax credit structure, not only to add value to Canadian based energy companies, but also to demonstrate to our fellow Canadians, using a proven existing technology, immediate greenhouse gas emission reductions.

● (1125)

Should this not be considered by our government, we risk further falling behind other countries, including our U.S. neighbour, in attracting investment and job opportunities and in advancing clean technologies.

Thank you.

The Chair: Thank you very much.

We will now go to Ms. Sumner.

You have the floor for five minutes.

Ms. Janet Sumner (Executive Director, Wildlands League): Good morning and thank you for the opportunity to speak with you about economic recovery from COVID-19.

My name is Janet Sumner. I'm the executive director for Wildlands League. Wildlands League is one of Canada's pre-eminent conservation organizations, collaborating with communities, governments, indigenous peoples, scientists and progressive industry to protect nature and find solutions that work.

We have been working in the public interest since 1968 imagining the future we need and the solutions to make it happen. Our vision is to protect at least half of Canada's land, fresh water and ocean to address both the climate crisis and the collapse of nature. In 1999, we helped usher in the single largest expansion of the Ontario parks system, adding 2.4 million hectares of protection. We are also known for connecting people to nature through such events as our annual Paddle the Rouge.

For the second year running, the World Economic Forum annual risk report named environmental problems in the top tier list of fears for the economy, specifically, climate change and biodiversity loss. A healthy economic recovery will depend on growing the economy but also reducing the economic risks due to climate change and biodiversity loss. A healthy natural world, therefore, is the very foundation for a healthy economic recovery.

For most Canadians, a healthy natural world requires taking action to rebuild and restore nature where we live. Scientists and health care providers are urging, and even prescribing, that Canadians get out into nature to maintain mental, emotional and physical health during this pandemic.

Whether young or old, new to the country or multigenerational, communities have expressed the need for more access to nature. We must therefore invest in creating more urban and near-urban protection; regenerating wetlands and restoring endangered species habitat; planting trees and rebuilding the natural infrastructure in our cities that is key to improving flood management and flood reduction; creating ecological corridors, such as Cootes to Escarpment EcoPark System, and ensuring there are more opportunities for communities to interact with nature, as on the Trans Canada Trail; and working with the agricultural, ranching and rural communities on restoration projects, such as the work that is done by ALUS in Alberta, Ontario and elsewhere.

In Scarborough, where I live, Rouge National Urban Park is close to home. Last fall, the superintendent for Rouge National Urban Park took my team on a walk, taking all COVID-19 safety precautions into account. We toured where they plan to restore the wetland and bring back the capacity of the Rouge to manage low- and high-water events.

By our own conservative estimates, this project will result in more than more 25 direct jobs per year. It will require engagement with nine first nations in partnership and with an urban design consulting firm to get the project design right; engagement in public consultation, with communications expertise; architectural renderings; Parks Canada staff to lead and do; Toronto and Region Conservation Authority staff; phragmites removal teams and expertise—the Rouge is choking in this invasive species—construction crews for the new boardwalk; mechanics to maintain equipment and machines; wildlife specialists; interpretation and education staff; manufacturers of decking and specialized material. All of that is in addition to the new wardens, beach patrol and 100 summer students for monitoring and invasive species control. There have been more than 100 projects with farmers working to address hydrology further upstream. In the last four years, more than 200 jobs have been created.

This is just one snapshot. Green Infrastructure Ontario estimated that 60,000 jobs could be created by investing in the building of natural infrastructure, and if we were to align systems and efforts, up to 140,000 jobs in Ontario could be a stretch target.

It is therefore the recommendation of Wildlands League that Canada invest in rebuilding the natural world where we live as part of a healthy economic recovery. It is time that we put nature at the heart of economic recovery.

I will conclude with one more example. Windsor, Ontario, is the flood capital of Canada. The risk to homes and municipal pocketbooks is exacerbated by climate change. It is also a biodiversity hotspot, with a high diversity of species and a high number of endangered species and little in the way of protection. There is less than 1% protected in southwestern Ontario, with pressure for more development.

Windsor is a perfect example of how rebuilding the natural world would benefit the quality of life, the economy and nature. If we were to build more natural infrastructure, doing so could manage water flows throughout the city, protect the Ojibway Shores complex as a national urban park and establish ecological corridors that stretch out to the surrounding rural areas and work with the farming community.

I'm going to skip to my last points.

● (1130)

This is not isolated in Ontario, because rebuilding nature where we live works in Saskatoon, Vancouver, Halifax, Montreal, Edmonton and Ottawa. If we can generate more than 100,000 jobs in Ontario by building with nature, we can do even more than that across Canada. Then think beyond that to the landscapes of regenerating seismic lines across B.C., Alberta, Saskatchewan, Newfoundland and the Northwest Territories.

Thank you very much for your time today.

The Chair: Thank you very much.

We will now start our round of questions.

For our first six-minute round, the first spot will go to MP Dreeshen.

● (1135)

Mr. Earl Dreeshen (Red Deer—Mountain View, CPC): Thank you very much, Madam Chair.

It has been interesting to listen to the witnesses this morning. I have heard various views. We looked at tax credits to make things work, and others were saying that the worst thing we could do is give tax credits because that would encourage bad behaviour.

I'll start with Mr. Fagerheim of Whitecap Resources.

I've seen the type of work that our oil and gas industry has done to become world leaders, and your work with carbon capture utilization and storage is amazing. Other projects in Alberta are doing the same, taking the equivalent of hundreds of thousands of cars off the roads. Of course, it's happening in Alberta, and it doesn't seem like anybody really cares about what is taking place there.

I'm concerned somewhat, because the way I look at it, we talk about all these great things we're going to do and that we are going to take all these minerals out of our landscape. Our last witness indicated we have to protect our landscape; therefore, we're not going to want to advance that in all areas. A couple of days ago we heard from indigenous leaders who were saying they need to have jobs and to be part of our natural resource development, and oil and gas is critical for them. We've heard from miners saying that any place else in the world you can get a project done in nine months, and it takes years and years here. We have Bill C-69, which ensures that is going to happen forever.

Where are we going to get all these minerals to create this electric vehicle battery development project when we have people who just don't want to see any development anywhere?

Mr. Fagerheim, I know the great work you've done. How do you convince others that our oil and gas industry is the best in the world and that it's better for us to be developing our great resources than giving it to somebody else to do?

Mr. Grant Fagerheim: I understand the frustration. We feel the very same frustration in getting recognition. This project in Canada, again the largest project in the world, has not been celebrated or brought forward onto the world stage. Outside Canada, we're recognized in all other parts of the world, as to the sequestration and storage we have. We have scientists continually coming in monthly from all over the world. We only do monthly tours.

[*Translation*]

Mr. Sébastien Lemire (Abitibi—Témiscamingue, BQ): Madam Chair, if the witness could lower his mike, it would make the interpreters' work easier.

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

[*English*]

Mr. Fagerheim, could you lower your microphone a little? We're having difficulty with the translation. Thank you.

Mr. Grant Fagerheim: Yes. Can you hear this okay? I'll assume you can.

The Chair: That's perfect.

Go ahead, sir.

Mr. Grant Fagerheim: We are recognized around the world, other than in Canada, for what the Saskatchewan government working together with the Canadian government did. This project has been in existence since the year 2000. It's been running for 21 years, so it's been studied.

With regard to getting recognition, first of all, I think we have to be recognized within our own country for the work that is being done in the oil and gas sector, not just in Alberta, Saskatchewan, British Columbia and Manitoba, but also in Quebec and Ontario. We need the opportunity to understand that decarbonization and for the world to see how responsibly developed our products are. That has not been celebrated. We are continually challenged as to the makeup of the products that we do bring to market. I think it has to be. The only way we can succeed is by being recognized across all of our provinces. We talked about that. We're going to advance. We hear some of our presenters talk about how we're going to have to build vehicles. Those come from steel and from mining projects. We're building cars, machinery, ships, concrete and buildings. We're going to have to continue to advance on that.

These are all mined materials, and mining takes energy. We can lead in these things. Plastics, bottles, tubing, paint, makeup—all of these come from products that are below the surface of the earth.

What we're going to have to do is recognize that there is a responsibility that we take seriously in Canada. If there's no recognition and there's no demonstration of measurable outcomes, we're not going to have success.

When I talk about cradle to grave, we're talking about mined materials. When we're moving to renewables, those materials require huge amounts of energy, so we're going to have to understand that and recognize that this is an energy transition. It's not a start-and-stop exercise. We talk about hydrogen. We're involved in a couple of hydrogen projects ourselves.

The offtake of the CO2 is massive, as large as it is on anything else, on any other products. We're going to have to make sure that we understand and respect where we're at. This is where I talk about this energy transition taking an extended period of time and about being practical and logical and moving through efficiently as we move through time.

● (1140)

Mr. Earl Dreeshen: Thank you very much.

The Chair: Thank you very much.

We will now go to MP Jowhari.

You have the floor for six minutes.

Mr. Majid Jowhari (Richmond Hill, Lib.): Thank you, Madam Chair.

Thank you to all our witnesses for their testimony today. I'm going to start with Mr. Zacharias.

Mr. Zacharias, the report titled “The Next Frontier”, which was published by your organization in April 2021 and which you referred to in your opening remarks, says:

> Canada is well-positioned to capitalize on what's been called the green economy's supercycle, during which sustainably produced energy and mineral prices soar.

Can you expand on what the green economy's supercycle means? Can you give us some background on the conclusion that you've come to? What were the key elements of it?

Mr. Mark Zacharias: Absolutely.

The green economy supercycle is basically those elements, those products, those goods that will be required to transition the world to low carbon and net zero. Canada has a very clean electricity grid at 83%, so we have the ability to basically produce and export products that are lower carbon than our competitors.

For example, we have the lowest-carbon aluminum in the world right now. Our steel, made from blast oxygen furnaces for that technology, is also the lowest carbon in the world. Our metallurgical coal that comes out of western Canada has half the greenhouse gas content and carbon footprint of that same coal coming out of Australia. The same goes for many of our forest products. Our pulp industry is the cleanest in the world right now from a GHG per tonne on various pulp products.

We have a huge opportunity, not only in terms of the cleanliness of the products, but also in terms of our markets. We have the U.S. adjacent to the south. We have the EU off to the east. We have Asia off to the west. We also produce a lot of the things that the world is going to need.

I'll give you an example right now around battery manufacturing and zero-emission vehicles. Canada has abundant sources of nickel, lithium, graphite, cobalt and copper. Those can be produced in Canada with low-carbon content. They can be used in Canada as well throughout the battery manufacturing cycle and then used in zero-emission vehicle manufacturing. You may be aware that the big three automakers all have agreements now with their unions and the various levels of government around producing zero-emission vehicles in Canada. It makes sense that we would back up that supply and value chain and start looking at not only the batteries that go into the vehicles but also the metals and minerals that go into them.

That's just an example of the green economy supercycle. I believe the term was coined by Bloomberg finance.

Mr. Majid Jowhari: Thank you.

In the same article, your organization talks about four additional recommendations. You touched on that in your opening remarks. The one in the article that piqued my curiosity was around Canada needing a rebrand: “We need to not only export low-carbon goods—but a new 'Clean Canada' brand to the world.”

Can you expand on that, please?

● (1145)

Mr. Mark Zacharias: Yes. Many of our markets, particularly in the EU, parts of Asia and now increasingly in the U.S., are really unaware of the low-carbon content and low-carbon footprint of Canadian products and services. Canada's largest export has been fossil fuels. It has been for quite some time and it probably will be for at least the next several years or decade. But there is a tremendous opportunity, and an export opportunity, for Canada to show not only our export markets but also Canadians themselves that we have a good story to tell. Our products can help the world transition to the Paris Agreement scenario.

Mr. Majid Jowhari: Thank you.

By the way, I found that article very, very interesting. As well, the comments and recommendations in the report entitled “Taking the Wheel” were very helpful, at least to me.

Under “A shifting global landscape”, you state, “Both the EU and U.S. policies, while differing in intent, have the same implications for Canada: our export industries need to be nimble and increasingly clean.”

I understand what nimble means, but can you talk about how they can become more nimble as well as increase their clean technology?

Mr. Mark Zacharias: A number of elements go into the definition of "nimble". One is government policy, particularly at the federal, provincial and territorial levels, that when we do have opportunities for new companies to come and set up shop in Canada, attracting anchor companies, we have to [*Technical difficulty—Editor*] those.

If you look at Quebec's Lion Electric, they have been getting orders for Amazon trucks and trucks for UPS. They're doing incredibly well. Lion Electric is also looking at becoming a battery manufacturer. They had a recent announcement. That's one example of where government intervention has allowed this to become more nimble. I would also look at another example in Quebec around attracting hydrogen. It's a very large new 88 megawatt hydrogen facility. I think that's great news for Canada.

Canadian industries have the ability to compete globally. With a bit of help and a bit of transition, they are able to do so.

Mr. Majid Jowhari: I would love to have been able to go into hydrogen, but I'm out of time.

Thank you very much.

The Chair: Thank you very much, MP Jowhari.

We will now turn to Monsieur Lemire.

[*Translation*]

Mr. Lemire, you have the floor for six minutes

Mr. Sébastien Lemire: Thank you, Madam Chair.

My first question goes to Mr. Chornet from Enerkem.

Mr. Chornet, thank you for joining us today. Thank you also for your technology, which meets a need, as I see it. You are making us aware of the importance of seeing the value in ultimate waste.

Could you also talk to us about any negative impact that you at Enerkem see for Quebec and Canada? By that, I mean the lack of a clear regulatory framework in Canada as to a minimum content of biofuel produced from waste and a standard for low-carbon fuel.

Mr. Michel Chornet: Currently, outside markets, specifically in Europe or the United States, are more attractive because they have regulations in place encouraging the use of second-generation, low-carbon fuel, or the products of green chemistry. It is more advantageous for Enerkem to sell its products in California or in Europe, because the regulations there are reasonable and encourage the choice of green chemistry, also called circular chemistry.

Canada will have to create the market conditions needed for projects to be undertaken and biofuels to be used. Otherwise, Canada will not be able to take full advantage of the greenhouse gas reductions associated with the use of biofuels, or of green chemistry.

The Clean Fuel Standard, which is in the process of being developed, could lead to a regulatory framework that would encourage the availability and use of biofuels in Canada. But, in our view, that framework must absolutely include lifecycle analysis. Diverting all the waste from landfill sites must be recognized with credits. There must also be an established percentage of circular or biological components. In addition, renewable hydrogen and renewable electricity must be recognized as having a carbon intensity of zero in order to ensure that production in Canada can increase. This has already been done in California.

In our view, producers of low-carbon fuel must be allowed to buy renewable energy off-site in order to reduce their carbon footprint. The process is known as "book and claim".

Lastly, credits must be awarded for diverting residual forest biomass—meaning bark and other left-overs—and reducing final uses that generate more greenhouse gases, such as burning fallen timber.

● (1150)

Mr. Sébastien Lemire: So the incentives you are looking at would be a clear Canadian regulatory framework, which would include a minimum content of biofuels produced from waste material, and a standard for low-carbon fuels.

What else do Quebec and Canada have to do to encourage favourable and competitive market conditions for bioenergy?

Do you have any specific recommendations for the government with a view to increasing its investments?

Mr. Michel Chornet: In our view, there must be consistency in life-cycle support for technological innovation. Programs like Sustainable Development Technology Canada or the Strategic Innovation Fund could be used, for example. The strategic innovation fund should especially be used to provide incentives for those who first become involved in new technologies. That would be a tangible step forward.

As I mentioned just now, buying renewable electricity off-site must be allowed. It's called the "book and claim" approach. At the moment, we are not able to use it, which is absurd, in our view. It is in use in other places around the world. It encourages countries to produce biofuels or low-carbon chemical products.

Mr. Sébastien Lemire: You mentioned the strategic innovation fund. It's a great program.

Have you used that program? How did it work for you?

Mr. Michel Chornet: With full disclosure, I have to tell you that we tried to obtain support from that program. We followed the administrative process, which is very onerous, for a number of years. Despite that, we did not obtain support.

During that time, we worked with international players like Shell, Suncor, Repsol and Proman, so that they could recognize our expertise and our technology. They agreed to invest in it.

The strategic innovation fund process turned out to be a little difficult for us and nothing came of it.

Mr. Sébastien Lemire: So, as I understand it, the federal government's principal fund was of no use to you, although you are working directly in the field.

For Enerkem, or for Quebec and Canada more broadly, what would be the advantage in adding a carbon-footprint criterion to the federal government's public calls for tender?

Mr. Michel Chornet: It creates a market for us and it is a good idea because it stimulates technology and innovation. We work in partnership with the industry and we have a principle whereby everyone is part of the solution. As a result, the industry is motivated to innovate.

Mr. Sébastien Lemire: Speaking of favourable market conditions, could a standard for low-carbon biofuel open doors for you on the international market?

Mr. Michel Chornet: It is always easier to export a solution that has been shown to be effective here. In our view, the Quebec-Canada brand strategy is already very strong internationally. But it would speed up the development of Canadian technologies, which could then be exported internationally.

Mr. Sébastien Lemire: I see another problem: we are not paying enough for our garbage and, as a result, your access to your raw material is limited. Is that the case?

Mr. Michel Chornet: That is the case, but a bigger issue is that we have no quantity standards for circular products. Such standards could require that a certain percentage of plastic in a product be circular, be recycled, in other words.

The Chair: Thank you very much.

[*English*]

Next up is MP Masse.

You have the floor for six minutes.

Mr. Brian Masse (Windsor West, NDP): Thank you, Madam Chair.

My first question will be for Ms. Sumner.

You mentioned Windsor as being the flood capital of Canada. I'd prefer it be known as the auto capital, especially the green auto capital for the future with EVs and battery development, but that's a side issue.

One of the things I'm struggling to figure out is how we look at some of the programs that are rolling out. There is the tree-planting program and an urban infrastructure program. There's a series of different initiatives that are out there, but there doesn't seem to be a comprehensive coordination of all those programs. Is that also missing some opportunity from the province?

What are your thoughts on this? It's almost like having a master plan, city by city, so to speak, from federal incentives to green our environment and increase our spaces for eco-recovery.

● (1155)

Ms. Janet Sumner: What we have right now is a good start. It's the promise of investments in building new urban protection and near-urban protection, a tree-planting program, investments in nature-based solutions, and an ability to hopefully see more natural infrastructure investments.

I would suggest that the piece that is missing is how to be more intentional about these. You could take any number of municipalities, but if you look at Windsor, you have the possibility to do new urban protection. Even offshore you have the ability to do a national marine conservation area. You can invest in natural infrastructure at the same time as you're doing the fuller landscape. You can look at creating jobs and economic opportunity by restoring habitat and working with farmers on hydrology changes that would benefit the farming community, but also benefit increasing our resilience to climate change.

That works very well across the Golden Horseshoe as well where you see everything from the Rouge to Cootes to Escarpment Eco-Park, the Toronto ravines, natural infrastructure and the Greenbelt. All of that could be more intentional and working in harmony and then linking in and making a bigger objective rather than each of those individual programs in isolation.

Mr. Brian Masse: Yes.

When I was doing a lot of my border work I met a gentleman named Stan Korosec who did a lot of border work for Sarnia and for Windsor. He actually was an OPP officer and later on he got special training on how to use the environment for security instead of putting up fences and so on.

We had the Toronto Community Benefits Network here.

Is there an opportunity to get our young people into different areas? For instance, there is a bridge being built and I know you and others have been supportive for a national urban park in that area.

What are the opportunities of getting young people into a skilled trade, so to speak, for some of these infrastructure projects? It could be transferable skills or it could be skills they could use in other places. It was similar when I was growing up. People would go tree planting from one place to another.

Is there a real opportunity here for jobs that could be transferable and used in multiple locations, almost like a high-degree trainable asset that would last for young people?

Ms. Janet Sumner: Yes, I quite agree with you, MP Masse.

In the Rouge, for example, I know that they've employed over 100 students to help monitor but also to work on the reintroduction of species that are native to the area. Those summer jobs are more than just tree planting.

That's the other thing. The job opportunities with nature are often seen as reductive down to, “Oh, we're going to plant some trees.” That's certainly part of it. The other aspect is scientific monitoring. They work with the academic institutions, the University of Toronto Scarborough campus, and they work with the Toronto Zoo. It's engaging young people and giving them career paths to perhaps a bigger and brighter future by working with these different institutions in enabling the science, actually making it real, and bringing these areas back to life.

I think in every community that you were engaged with on this there is an opportunity to bring in youth as well as indigenous partners and indigenous jobs in terms of bringing back the native species, learning ceremony, and learning how to invest in these natural areas.

Mr. Brian Masse: Similarly, when we think about a place like mine, traditionally you're thinking about skilled trades. Going back to the old days, it could be working on auto skills or woodworking skills, so forth, even some electrical plumbing.

Once you learn these environmental infrastructure skills, are there also those skills that you bring back to your own home, your own neighbourhood, to your own community, perhaps as a volunteer? Is there greater sophistication of using those types of skills to better enhance when you're off, so to speak, when you're not involved in these projects, like adding a value-added capacity like we've never seen before? I would suggest even retraining not just young people, but also retraining for that. Is there value in that?

Ms. Janet Sumner: I think you will notice that the garden centres have probably doubled and tripled their business because of the pandemic and the desire of Canadians to get out and be in nature but also to start reclaiming it in their own backyards, whether it's growing plants on their balcony, growing fruits and vegetables in their backyards, etc. It's this ability of people to connect with nature, have jobs that are about rebuilding with nature at the heart of it, but also taking that into their homes and building those connections for their children, their extended family and their entire community. I think that those skill sets and starting to see the natural world in a different way are completely transferable.

● (1200)

Mr. Brian Masse: Thank you.

I see you have the card, Madam Chair, so thank you.

The Chair: Thank you very much.

We'll now start our second round and we'll start with Monsieur Généreux.

[*Translation*]

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

Mr. Bernard Généreux (Montmagny—L'Islet—Kamouraska—Rivière-du-Loup, CPC): Thank you very much, Madam Chair.

My thanks to all the witnesses for joining us.

My question goes to Mr. Chornet, from Enerkem.

Mr. Chornet, in 2010, the Conservative government of the day and the Liberal government in Quebec announced an investment in a project to process putrescible waste. It was called the Société d'économie mixte d'énergie renouvelable de la région de Rivière-du-Loup, or SEMER. Perhaps you have heard of it. The project saw the light of day in my region.

At the start, it was a $12 million project. It became a $24 million project and now it's close to $30 million. To this day, SEMER has not managed to earn enough income to cover its costs. That has a significant effect on the environmental cost of the project.

I supported the project and I still support it. In 2005, I was the mayor of La Pocatière, and the Government of Quebec decided to implement a policy to recycle all the putrescible waste in Quebec in 2020. We are now in 2021 and the timeline has been changed.

Do you believe that the policies that governments establish should be fulfilled in their entirety?

From the answers you gave my colleague Mr. Lemire, I gather that you have encountered a lot of difficulties along the way.

Mr. Michel Chornet: That is a good question.

I can't speak for SEMER, but, to give you some context, Enerkem takes waste after it has been composted, recycled or reused. So we are talking about everything that is not recyclable or compostable.

To answer your question more specifically, let me give you California as an example. Companies in that state are not required to reduce their greenhouse gas emissions by 2% to 3% per year, but if they do not do so, they have to pay a penalty of $200 American dollars per ton. So the requirement is an indirect one. They have the option of not doing so, but that costs a lot more than acquiring the technology they need.

You need rigour, you need the will and you need popular support, and I feel that we have that in Canada.

Mr. Bernard Généreux: But do you consider that current federal policies are sufficient or rigorous enough? Could they be improved or broadened?

The government's ambition is to reduce our greenhouse gas emissions by 40% to 45%. But we know that they have increased in the last 25 years.

Is it realistic to think that it will be feasible, given the current legislation?

Mr. Michel Chornet: In my opinion, Canada has a unique opportunity to meet those objectives. However, any standards or regulations must support innovation.

In California, the state standard supports innovation. For example, it recognizes renewable hydrogen, which is hydrogen produced with a renewable source of electricity. It has a standard and it provides transparency around the life cycle calculation, which is used consistently for all products industry-wide. It is able to recognize innovation and provide credits in our industry for waste diversion, for example, to account for what would happen if it were not recycled.

In my opinion, the Clean Fuel Standard being developed is an attempt to address this issue, but it needs to be more consistent. The standard needs to drive innovation, which we think California has done well, as has Europe with the Renewable Energy Directive.

Mr. Bernard Généreux: Based on your response to Sébastien Lemire's question, I gather that you have been very persistent with respect to the strategic innovation fund.

I also gather that you haven't been able to secure funding from it.

Have you been able to obtain any other assistance from the federal government?

● (1205)

Mr. Michel Chornet: Over the past 20 years, Enerkem has made use of all the programs. Sustainable Development Technology Canada has certainly been a very good partner for Enerkem and we have received support from them.

With respect to the strategic innovation fund, we hit some roadblocks. The intention is very commendable, but the administrative process is onerous.

Mr. Bernard Généreux: Is my time up, Madam Chair?

The Chair: Yes, it is.

Thank you very much, Mr. Généreux.

[*English*]

Our next round of questions goes to MP Lambropoulos.

You have five minutes.

Ms. Emmanuella Lambropoulos (Saint-Laurent, Lib.): Thank you, Madam Chair, and thank you to all our witnesses who are here today to answer questions.

Ms. Sumner, I'm going to begin with you.

There's a group in my riding that advocates for the protection of wetlands in Saint-Laurent near a technopark, which I've gone to visit. It's quite beautiful. They have many different species of birds, including endangered species that consider that their home.

One of the problems the people who wanted to protect these wetlands ran into, as well as the mayor of my riding and myself, is that Parks Canada didn't necessarily consider this the natural habitat of these species of endangered birds, so that was blocking Parks Canada from taking the next step or moving forward, even though we, as a Canadian government, are trying to protect, in the last budget and in our platform, 25% of our natural lands.

Do you have any comments on Parks Canada and the way they go about protecting? What are things that stand in the way? What are ways we can improve the way that Parks Canada works in order to be able to protect more and have fewer barriers for organizations willing and wishing to protect areas?

Ms. Janet Sumner: You raise some very good points. I think right now we are in a place of learning from nature. As climate change is affecting our environments and shifting ecosystems, and in fact, as ecosystems are under pressure and there is less area for species perhaps to be in locations where they normally would have been, we have to start learning from species and from nature.

One of the things I'm encouraged about with Parks Canada is that I believe they are looking at some new models that they will be taking out and having a conversation with the public around the development of ecological corridors. Using a guideline developed at the IUCN, ecological corridors will be about what the ecological functions are that we find there are and how we protect them. It might not be strict protection, but it might be a more flexible tool to help us achieve some of our ecological objectives around species.

CWS at Environment Canada also has a responsibility for helping manage and protect endangered species. It might not use the tool of strict protection but other tools.

For all of us, these are unprecedented times as nature is shifting and trying to adapt. It will be important for all levels of government, and in fact, all of society to be continuing to learn in these very real, live experiments that we are seeing play out in our backyards.

I don't know the particulars of this specific case, but I would hope there could be an open dialogue with Parks Canada as they are in a learning mode and trying to bring new products to the public that can help achieve the goals around protecting endangered species, and in fact, growing habitat.

Ms. Emmanuella Lambropoulos: That's amazing. That's good to know. Thank you very much. Maybe I'll push them to try again now that they're in this learning mode.

My next question goes to Mr. Fagerheim.

If we look at production versus storage, I know you mentioned that you have a great storage system for carbon dioxide and that's how you've maintained zero net emissions. What happens once the storage space runs out? I'm not a scientist. I don't really know how this stuff works, but how sustainable is this solution?

● (1210)

Mr. Grant Fagerheim: In the long term, very much so. Thanks for your question.

We have capacity right now. In the one particular reservoir, we store 36 million tonnes, as I referenced earlier. We have capacity today in that one reservoir to move an incremental 80 million tonnes, so up to about 116 million tonnes.

We have identified storage capacity of up to about 250 million tonnes on our lands in western Canada at this particular time. There's plenty of capacity in the reservoirs. There is infrastructure in place to our existing assets.

When thinking about this long term, we talk about the transition. Just so you're aware, what we do is we acquire the CO2—we don't get credits for acquiring the CO2—we sequester it, put it in the ground—we don't get credits for it—and we recycle approximately one-third of that. Let's use 300 million cubic feet a day of CO2. About 200 million a day is recycled and about 100 million is new purchases that we have to acquire at this particular time to put in the ground. We don't get credits for those.

Across western Canada—

The Chair: Mr. Fagerheim, I'm sorry, but we're really over time. I wanted to allow you to finish your explanation for the benefit of the committee, but unfortunately, we're really over time. Maybe in a subsequent round, you can elaborate a little further.

With that, we will go to Mr. Lemire.

[*Translation*]

Mr. Lemire, you have the floor for two and a half minutes.

Mr. Sébastien Lemire: Thank you, Madam Chair. You always find a way to balance the time. I thank you for that.

I will come back to Enerkem. I understand that Canada doesn't have the right regulations to ensure added value for residual material or ultimate waste. The prices could be raised to secure the resource as a raw material for you and your technology. That's the challenge of regulatory obligations.

What models are leading the way internationally, particularly in the low-carbon fuels market? People often talk about California, the United States, Catalonia and Europe.

Can you tell us about those models?

Mr. Michel Chornet: I can talk about them a little, although I'm not an expert.

One forward-thinking model is California's Low Carbon Fuel Standard. California has a timeline for greenhouse gas reduction, about 2% or 3% per year through 2030. They have a penalty for non-compliance of $200 per ton of CO2 equivalent. It was one of the first strict mandatory models, and it has spurred innovation tremendously. The petrochemical industry has accepted the model and is actively participating in it by seeking solutions.

Another very interesting model is the one governing all of Europe, the Renewable Energy Directive, and it has been renewed until 2030. They are already working on a renewal to 2040.

In our sector, the trouble lies in what is called the technological risk of innovation. We understand that, but to fund projects, we face a risk in terms of the market if regulations are not secure or strict. This leads to trouble with respect to financing. You can't finance projects in the traditional way. It takes a regulatory plan that goes beyond 2030 and into the future.

Mr. Sébastien Lemire: Thank you.

As I understand it, the problem is also that companies or municipalities, for example, are not required to sell you their residual waste. It's much cheaper for them to bury their waste in a landfill or put it in a container and ship it to other countries for processing there. No one is being forced to process it here and thereby to improve the conditions for a company like yours to grow. Do I have that right?

Mr. Michel Chornet: That is exactly right.

Right now, based on life cycle analyses, throwing plastic into the ocean or into a landfill is considered environmentally acceptable. That's a bit absurd. The life cycle analyses give no credit for doing otherwise.

Mr. Sébastien Lemire: Thank you.

The Chair: Thank you very much.

[*English*]

Our next round of questions goes to MP Masse.

You have two and a half minutes.

● (1215)

Mr. Brian Masse: Thank you, Madam Chair.

I want to return to Ms. Sumner with regard to the national marine park.

I'm a vice-chair of the Canada-U.S. Inter-Parliamentary Group.

The U.S. actually wrote the federal government about providing monies for the Great Lakes. They're doing a lot of co-operative work at their state level and their federal level, and the Biden administration is putting more resources in there.

Would this not be an opportunity? How well positioned are we to look at something like that for the Great Lakes, especially given the fact there is a push from the Biden administration, also even from Republicans, to put more money into the Great Lakes? I'm wondering about the viability of that as one of those projects to get off the ground.

Ms. Janet Sumner: I actually think it's a very good idea to be looking at national marine conservation areas in the Great Lakes. When we talk about a national marine conservation area, most people think that, because of the word “marine”, we're talking about salt water, but in fact, that tool can be used in a freshwater system because it's international waters. That's what makes it possible for Parks Canada to use that as a tool for protection.

We have supported the need to see national marine conservation areas in all of our Great Lakes, including our sixth great lake, which is Georgian Bay, and we would like to see marine protection in each of those.

I think that with the auspices of the Great Lakes Water Quality Agreement needing to be renegotiated and worked on with the U.S., this would be one of the perfect times to be looking at NMCAs as a potential tool in the Great Lakes. It would work in Lake Ontario and Lake Erie, obviously, Georgian Bay, etc., in trying to move those forward.

One of the fantastic things about marine protection is that it actually grows more fish and bigger fish adjacent to that area, so it actually helps in terms of commercial fishing.

Mr. Brian Masse: In terms of Leamington, which is one of the larger fishing operations in Canada, that would be a real net benefit. We're struggling with algal blooms and a few other things, but this is a very robust area for not only fishing but also processing material, so that would benefit from that type of an ecological investment. Is that what you're suggesting?

Ms. Janet Sumner: Certainly, if it was partnered, as well, with terrestrial protection, I think that you could do an amazing job in the Leamington area. Having grown up in London, I know Leamington quite well, so I think that just off the shores of Lake Erie would be an amazing place for a new NMCA.

Mr. Brian Masse: Today I went to Point Pelee, and on the way home I got some fish from a local shop that's still open.

I think my time is up, Madam Chair.

The Chair: Thank you so much.

With that, we will now go to MP Poilievre.

You have the floor for five minutes.

Hon. Pierre Poilievre (Carleton, CPC): Thank you very much.

My question is for Mr. Fagerheim, the CEO of Whitecap Resources.

Mr. Fagerheim, I'm going to read a quote from Elon Musk, who is, of course, one of the most famous renewable energy and energy transformation entrepreneurs in the world. He said, “If there was a button I could press to stop all hydrocarbon usage today, I would not press it.” Reporter: “You would not press it?” Elon Musk: “Of course not.” Reporter: “You would not press it because....” Elon Musk: “It would cause human civilization to come to a halt.” Reporter: “Every hospital would have to close down.” Elon Musk: “That would be ridiculous. It would be irresponsible to press that button. What does need to happen is to, if we can, accelerate the transformation to renewables. That's the sensible thing to do.”

That seems to be what you are doing, Mr. Fagerheim. You have invested in carbon capture and storage. You have the biggest carbon sequestration facility, deposit, in the world, and I understand that you are the head of the only carbon-negative petroleum company on the planet Earth. In other words, your company takes more greenhouse gases from the atmosphere, or avoids their being pumped into the atmosphere in the first place, than you actually emit. In other words, if your company didn't exist, there would be more greenhouse gas emissions than there are now.

Do you agree with Mr. Elon Musk when he says that shutting down oil and gas, as is the policy of the federal government, would bring civilization to a halt if it were to happen without a just and sensible transition like you are attempting to, through your investments in technology, achieve?

● (1220)

Mr. Grant Fagerheim: Thanks, Mr. Poilievre.

I do appreciate what Elon Musk is attempting to do. It's a fairly draconian statement to talk about shutting down civilization without oil and gas. The comment we should be taking from that is that civilization is extremely linked to hydrocarbon products. We're talking about oil and gas into the future. It's our livelihoods, whether it's hospitals, any chemical production or anything that we do at this particular time in everyday society. The clothes we wear and all the textiles all rely on hydrocarbon products.

We agree. On the medical science side, on hospitals closing and the amount of materials that are used, it's petroleum products. This is where I come back to. We need a measured approach into the future, which relies on science and technology, like carbon capture, utilization and storage. We're going to transition for an extended period of time. This is not a start-and-stop exercise. It should be respected and rewarded.

Just to close off on that, what isn't talked about much is the hydrogen development side that everyone is so excited about. Hydrogen development needs carbon capture as well. There is going to be a transition phase that we should be advancing through very practically, logically and sequentially.

Hon. Pierre Poilievre: Right.

According to the International Energy Agency the world will be consuming 100 million barrels of oil per day 20 years from now in 2040. Even with the most draconian governmental policies to restrain the use of hydrocarbons, there will be at least 60 million barrels a day of worldwide petroleum consumption.

The question is, where do we want that to be produced and how? Do we want it to be produced by the Saudis, Venezuelans, Algerians and others and then imported to Canada, which is the policy of this government? Do we want it done by our own Canadian industry, as exemplified by your company that employs 700 people and empowers first nations communities and actually reduces greenhouse gases? Do we want hostile, foreign, polluting nations to make our energy for us? Which option should Canadians pick?

The Chair: Answer very quickly as you're out of time.

Mr. Grant Fagerheim: I would say get back to the respect that the Canadian energy space has. It should be recognized, celebrated and brought forward. We're known worldwide. Not just Whitecap, but the energy sector in Canada is understood to have the most responsibly developed hydrocarbon products anywhere in the world.

Hon. Pierre Poilievre: Absolutely.

The Chair: Thank you very much.

We will now go to MP Ehsassi.

You have the floor for five minutes.

Mr. Ali Ehsassi (Willowdale, Lib.): Thank you, Madam Chair.

Thank you to all the witnesses. I found today's testimonies to be very helpful.

I will start off with Mr. Zacharias.

Mr. Zacharias, as you know, the study before us is about green recovery in the context of what the government can do to ensure that we come out of this stronger. You talked about Canadian innovation. You talked about it in the context of our clean electricity grid, but also in terms of products such as aluminum, steel and forest products.

On this rebranding that you speak of—you're essentially saying the world needs more Canada—where have we dropped the ball? How could we do a better job promoting Canadian exports in these specific fields?

Mr. Mark Zacharias: Well, there are many parts to that answer. I think, first and foremost, is our federal missions and trade missions abroad should be basically promoting the fact that Canada's largest exports are currently fossil fuels and auto parts, but we can do much more. We should have educational awareness of all of our outreach in terms of working with other countries and other companies and what our opportunities might be. I think that's one of the first parts in terms of a Canadian export brand.

The second one is very few nations know that we do have carbon content standards and the ability to produce goods and services that are much lower than many of our competitors. British Columbia, in the last two years, has actually done benchmarking, showing that, yes, the commodities that B.C. exports are lower in carbon than almost all of its competitors. That needs to get pushed out again to the global market, so that when companies like BMW are looking for lower- or zero-carbon aluminum, they'll look at Canada for sourcing that, and when companies are looking at copper for global EV manufacturing, they'll look at Canada. We are big producers in this, and we can do a good job.

Also, too, it really is about rethinking around our export markets. For many years—post the 2008-09 recession—much of Canada looked at Asian markets to grow our market share there. We also now have the U.S. looking at border carbon readjustments and also looking at the U.S. buy clean. The export brand is not just an aspirational thing that we would like to do, but it's something we're going to have to do to demonstrate the carbon content of our products in order to be able to trade with new nations.

● (1225)

Mr. Ali Ehsassi: Thank you very much for that.

Perhaps I can take it to another issue which is, again, with respect to the need to reposition. You spoke of some of the announcements we've been hearing over the course of the past year with respect to electric vehicles, from the top three auto manufacturers that have worked with their unions. Are we doing a good job of making sure we are focused on that particular sector and taking advantage of all those opportunities out there?

Mr. Mark Zacharias: I think we are. I think Canada, particularly since the Biden administration has come into power, has had a particular focus on the automotive industry. It is such a large part of Canada's economy, and it's part of our economic and cultural history. Also, too, I think Canada has been doing a good job on their ability to seamlessly integrate, as we have been doing, into the U.S. market under the U.S. buy America policies. I think where Canada could do a little bit more is by backing up value chain and supply chain to look at what components and metals and materials are going to be going into these vehicles. Where do they come from? How do we try to ensure that they actually come from Canada?

There's another part of this, too, around the buy clean aspect. If we can actually have the Canadian federal government, through things like infrastructure projects, use low-carbon materials such as steel and aluminum that are actually produced in Canada, and if we can scale up production of these, that production can then go into things like vehicle manufacturing.

We have an opportunity here to connect a whole bunch of dots. I think there is some growing realization and recognition just over the last couple of months, and particularly in budget 2021, that shows that thinking is happening.

Mr. Ali Ehsassi: Thank you for that.

In terms of backing up our value chains, are we well positioned in so far as battery manufacturing is concerned in this country?

Mr. Mark Zacharias: I don't have much time left. We are in early days and we are playing catch-up to Asia, Europe and the U.S. We have work to do.

Mr. Ali Ehsassi: Thank you.

The Chair: Thank you very much.

We'll now start our third round of questions.

Our first round will go to MP Baldinelli.

You have the floor for five minutes.

Mr. Tony Baldinelli (Niagara Falls, CPC): Thank you, Madam Chair. Thank you to all the witnesses for being with us today.

I'm going to follow up on the comments of my two colleagues, Mr. Ehsassi and Mr. Jowhari.

Mr. Zacharias, I too printed off the report, “The Next Frontier”, and was examining it. I was really struck by the comments. I enjoyed listening to the comments that this opportunity, as we move to net zero by 2050, provides a huge economic opportunity for Canada, and on the notion that a climate plan is also an economic plan. I agree with your comments on that.

In your report in the section that talks about the advantages, you identify the three: our clean energy, our clean tech and our carbon capture technologies in our supply chain. I want to talk about two of them.

I come from a community that has two hydro-generating facilities. We produce in Niagara, with Beck I and Beck II, the Sir Adam Beck stations, 2,200 megawatts of hydroelectric clean power that's put into the grid.

We talk about the grid and the notion of hydroelectricity and the 83% emissions-free, and so on, but it's an aging grid that's in place. I'm wondering if you've done any studies about what is required, from an investment perspective, to update our grid, to take advantage of the growth that's going to be required in the future.

● (1230)

Mr. Mark Zacharias: That's a great question.

About 60% of Canada's electricity is produced by hydro right now. As you note, that grid is aging. However, there are new technologies coming behind that, which will be able to produce power at much lower rates and store it in ways we can't even imagine today.

It was inconceivable even five or 10 years ago that we would have renewables—solar and wind—below about 5¢ per kilowatt hour. Just over the last couple of weeks, Saudi Arabia has bid out a new solar array at 1.04¢ per kilowatt hour. That's for the production of the renewables, and it's plummeted in cost. Canada, I believe, has had 9% growth in wind. I'd have to check on that.

Also, on the other side of the equation, is how to store renewable energy. Right now there are companies in Canada, like Hydrostor out of Ontario, that are building very large grid-scale storage facilities in California, such that costs of storing electricity produced from renewables are going to be plummeting. This, combined with Canada's existing nuclear plus hydroelectric, puts us in a very, very good position. If we are going to produce things, for example, like clean hydrogen from electrolysis, we're going to have to scale up our generation across Canada.

Mr. Tony Baldinelli: That's great. Thank you.

Also, as part of that, one aspect of our our clean energy advantage that you talked about was that it can also support indigenous self-determination. I was wondering if you could expand on that a bit.

Mr. Mark Zacharias: Yes. There is an organization called Indigenous Clean Energy that looks at building partnerships with indigenous nations as well as with rural and remote communities. The recent federal budget, budget 2021, had, I believe, $35 million for indigenous clean energy generation, so there is an opportunity there, particularly as renewable grids require large areas, for either wind or solar. Those can be located on a lot of indigenous lands in indigenous territories, ideally with their full consent and partnership.

Mr. Tony Baldinelli: Excellent.

Last of all, we talk about the third advantage in our supply chains. When you were talking to my colleague, you spoke about connecting the dots and about how we not only have the ability to produce those raw materials but also to actually create the materials to create the end product. I think you identified that we spend more than $7 billion annually on imported steel and aluminum materials that are typically higher carbon than are our domestic options. Could you quickly expand on that and on how we could turn that into another advantage for us?

Mr. Mark Zacharias: Absolutely.

In B.C. the Pattullo Bridge replacement will be using steel that's going to be sourced from Asia. That steel could have come from Ontario steel plants. They produce the same type of steel that will be necessary. What would have been required in that case would be some federal policies around finding the lowest-carbon sources of steel, and if those sources of steel come from Canada, which ideally they would, that steel would be used in Canadian construction and we would scale up our industries.

Mr. Tony Baldinelli: Thank you so much.

I saw the card from the chair, so thank you for your time today.

The Chair: Thank you.

With that, we will go to MP Jaczek.

You have the floor for five minutes.

Ms. Helena Jaczek (Markham—Stouffville, Lib.): Thank you very much, Madam Chair.

Thank you to all the witnesses for their very interesting testimony today.

My first question is for Ms. Sumner.

I'm so pleased that you've had the opportunity to talk about the Rouge National Urban Park. As you're well aware, a very large part of the park is in my riding north of Steeles Avenue. You've talked about the opportunity for economic development within the park, adjacent to the park. You may well be aware that the City of Markham has great plans, potentially, for a gateway to the park.

I'm wondering if you could expand a little bit on the opportunities north of Steeles in the Rouge park and whether you think our government should be investing more within the park to allow for those economic opportunities, jobs for youth, etc. Just give us a picture of what you can see as the potential.

Ms. Janet Sumner: Thank you very much for the question.

You're quite right. I am very familiar with the park, having worked on the creation of it, and with many of the interests around the park, including some of the farmers who are currently overlapping with the park and are just adjacent to it.

The farming community has been a great asset to improving the ecological integrity. A really key point in developing the park was to actually have the buy-in of the farmers to see themselves having a role. I see increased and further roles for the farming and agricultural community, so that they can be engaged in improving the ecological integrity of the park.

Quite frankly, we've only just begun. It's early and it's in its development. It's been perhaps four years now, maybe three, that the park has been fully operational.

I know the park superintendent has prioritized various areas where there has been development. I suspect we will be moving further north with anything from signage to interpretation; a visitor centre, which will be a very important piece; programs, like restoration and building better hydrology for the park, a very key element; and reintroduction of species.

What we're seeing now is an investment in science. The partnership with the Toronto Zoo and the University of Toronto, along with various science and reintroduction programs and ecological restoration projects will be going forward. We will only see more of those and not fewer.

When I recently spoke to the park superintendent to get an idea of just how many trees could be planted in the park, for example, my understanding was that the Rouge National Urban Park could accommodate up to 500,000 more trees over an 18-month period.

The catch on this is that the supply chain for trees is limited, so making investments in growers who could supply Rouge National Urban Park with the right trees to the right places would start to generate jobs and volunteer opportunities, quite frankly, as well.

This park, which is within an hour's reach of seven million Canadians, is the perfect place to be investing. It is also about improving water retention in management levels for this area, which benefits everybody. I live within 10 minutes of Rouge National Urban Park, admittedly, in the south, but it actually was the area that survived the ice storm in 2013 the best, because of the native species and the tree canopy we have there.

I suspect we will only see more jobs emerging from the regeneration of nature in this area.

● (1235)

Ms. Helena Jaczek: Thank you so much. I totally agree with you. Believe me, there will be plenty of volunteers available to plant those trees.

My next question is for Mr. Zacharias.

Mr. Zacharias, you heard from Mr. Fagerheim about the opportunity for carbon capture sequestration. Has Clean Energy Canada had the opportunity to look at this technology, and to give an assessment in any way of its utility and its place?

Mr. Mark Zacharias: Thank you to the member. I see a yellow card, so I'll be very quick.

Yes, the technology is robust. Yes, it does sequester carbon. It could use some tax incentives similar to those in the U.S. It has a 45Q tax credit that gives a $50-per-tonne incentive to store carbon underground. Canada has a significant amount of basaltic geological formations as well as used oil and gas reservoirs in which you could store CO2.

The Chair: Thank you very much.

[*Translation*]

Mr. Lemire, you have the floor for two and a half minutes.

Mr. Sébastien Lemire: Thank you, Madam Chair.

I will continue with Mr. Chornet of Enerkem, so that I understand what is going on as well.

Mr. Chornet, you have a green end product, ethanol or methanol, that reduces greenhouse gases. You produce this fuel from a renewable energy source, hydroelectricity.

On the other hand, I understand that the Clean Fuel Standard has implications for your operations, including the price at which you are able to sell to a market like California. That is because the emissions factor is based on a Canadian average, and we know that, in the rest of Canada, they can use oil derivatives or oil itself for production.

Does the Clean Fuel Standard carbon rating hinder you?

Also, what are the economic benefits of what you do at Enerkem?

Mr. Michel Chornet: Thank you for the question.

Yes, the Canadian average is hurting us. In its low-carbon fuel standard, California has determined that electricity generated from renewable sources like hydro has a zero carbon footprint. The same is true in Europe. In Canada, on the other hand, they determined that its carbon footprint is bigger, and that hurts us.

The construction of an Enerkem plant generates about 500 jobs. During its operation, which will last at least 25 years, we're talking about another 100 jobs. That represents an economic impact of $85 million in Quebec and Canada.

Our technology offers a way to energy transformation in Canada. You were discussing the oil industry earlier. We have a partnership with the oil industry, a strong partnership with Suncor. It's a perfect example of how industry sectors can be complementary: Suncor has the operating expertise, we have the innovation and research and development expertise. Together, we're able to deliver Canadian solutions that reduce greenhouse gases and create high-quality jobs.

● (1240)

Mr. Sébastien Lemire: So you are proposing that we divert from landfill. It is well known that diverting residual waste can produce ultimate waste. You are therefore in a pure circular economic model, since you are powered by forest biomass, among other things. Is that right?

Can you tell us about this circular economic model?

Mr. Michel Chornet: What Enerkem does is advanced recycling, in symbiosis with the mechanical recycling we hear about more often: sorting centres, composting or biofuel recovery. Over the past 30 years, only 12% of all waste has been recycled, so the majority of products still need to be recycled. At Enerkem, we go after the materials that are not recyclable, to do advanced recycling.

Mr. Sébastien Lemire: Thank you.

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

I know that you didn't get the opportunity to finish your explanation. If you want to send a document to the committee to explain the circular economy or your point of view, feel free to send it directly to the clerk.

[*English*]

We'll now go to MP Masse.

You have two and a half minutes.

Mr. Brian Masse: Thank you, Madam Chair.

I'm going to move to Mr. Cochrane.

With regard to the U.S. and U.K., you mentioned that they were raising corporate tax cuts, but they're also moving into finding other revenue streams.

How out of step is Canada right now not addressing, I guess, some of the profiteering that's taking place during COVID-19? Other countries are doing some adjustments. There have been even preferential government treatments to companies that have really enjoyed some excess profits at this point in time. The telecom sector, for example, is one. Bell took in hundreds of millions of dollars and, at the same time, has had significant profits.

Dr. D.T. Cochrane: It's hard to say at this moment that Canada is out of step, but the fact that there has been very little discussion spurred on by what has come out of the U.S. and the U.K. governments is worrying. The current Canadian government prides itself on being progressive and is currently being eclipsed in terms of progressive tax measures by the Biden administration and even by the Conservative U.K. administration.

We have seen that the pandemic has been K-shaped. A study by Canadians for Tax Fairness identified over two dozen corporations that enjoyed record profits during the pandemic. While lots of people were struggling to make ends meet, some companies were managing to bring in higher profits than ever before, and they were sending those profits to their shareholders, many of whom had become rich because of decades of the carbon subsidy.

It's been a little bit disconcerting to hear people complain that the fossil fuel industry is not getting the credit it deserves when the fossil fuel industry has been incredibly overdeveloped because we had the carbon subsidy in place.

Mr. Brian Masse: I'm sorry to cut you off, but I'm going to run out of time.

How important is it to redirect or redistribute to small businesses, say for example, who right now are really struggling, and to keep them in some type of structure to be able to compete afterwards?

I'm worried about small business getting side-swiped during all of this and a lot of bankruptcy.

Dr. D.T. Cochrane: Put the money there. Support them. Support those small businesses. Support the local economy. Support the things that will keep our communities thriving. If the concern is that the debt is growing, then you can find the money where it is, which is with the wealthy.

● (1245)

Mr. Brian Masse: Thank you.

Thank you, Madam Chair.

The Chair: Thank you very much.

We will now go to MP Dreeshen.

You have five minutes.

Mr. Earl Dreeshen: Thanks again.

One of our previous studies was on the activities of state-owned enterprises, and we've just completed that. One of the issues there has to do with mining operations. Of course, we have operations here in Canada, and as we heard in one of our last panels, there's concern that Chinese investors want to come here and be part of this new electric vehicle push as far as mining is concerned. That's something that we have to be aware of.

From multiple independent studies, we know that the use and regulation of subsidies to force installation of costly renewable energy generation in Canada has reduced income and employment here while it has benefited the suppliers of solar and wind generation equipment in other countries. Largely, these are from China. For example, six of the top 10 solar panel manufacturers are Chinese, the result of a deliberate strategy by the Chinese government to dominate that market. Foreign dominance of manufacturing characterizes the production of wind turbines as well, only in that case the centre is in Europe.

One of the things we try to talk about is what Canada will do as we try to get into this new push as far as mining is concerned.

Let's take a look at what China has done. There's an area in China, I don't know how deep it is, but it's 19 square miles of land that has been used to produce solar panels. If you work that out, for every man, woman and child, you take a coffee cup and that's how much area has been taken just for solar panels, however deep that happens to be. We seem to forget and think when it happens someplace else in the world it doesn't matter. If it was on our front lawn, maybe we would take a little different look at this.

My concern is that we aren't paying attention to these other countries that are poised to take over from us, and if they can't manufacture here, they'll go to some other country. Therefore, the competition and the opportunities for these companies that are Canadian based will be very difficult in terms of ensuring their success.

Mr. Zacharias, you've been involved in this and you understand what is happening in the rest of the world. How confident can we be that we aren't going to be overtaken by some of these other countries that actually don't have our best interests in mind?

Mr. Mark Zacharias: Member, that's a good question.

My response to that in terms of how to prevent all our purchasing going overseas to purchase things that could be made here in Canada, again really comes back to a buy clean type of approach. What the Biden administration is looking at in terms of the buy America approach, the Canadian version would ideally be where we would look at carbon content standards of metals, materials and products and goods that would come into Canada, and if those don't meet a threshold, they can't come in.

That would incent a number of things. One is that the manufacturer of those things would be here in Canada and scale up our manufacturing. Two, once that happens, we would be able to reach a sufficient size in terms of some of our industries, by which we'd get export into other markets because we would have low-carbon, sustainably produced products. Three, if those things are manufactured in Canada that will support a clean economy including mining, they will also ideally use Canadian metals and minerals in their production.

Those discussions are ongoing. Minister Wilkinson and Special Envoy Kerry made an announcement two weeks ago around looking at greening government. That is the first step down this path to address some of the issues you bring up.

Mr. Earl Dreeshen: Okay. I'm in the last minute now.

We talk about the U.S. and we talk about Canada. We should understand or respect the fact that metallurgical coal is coming out of the northwestern U.S., going through our Vancouver port and heading over to China to help them produce steel, which they then ship back to Canada and undercut our steel markets here. Those are issues that have to be worked into the calculations when we look at just where we're getting this from, who's winning and who's losing.

Thank you very much.

Do you have any quick comment on that?

● (1250)

Mr. Mark Zacharias: Member, I fully agree with you.

We have an enormous amount of Canadian met coal that comes out of British Columbia. It's moved over to Asia. It's used to produce steel, and that steel comes back into Canada. Meanwhile, we have a very robust steel manufacturing industry here in Canada that could potentially use Canadian inputs. Therefore, I agree with you.

Mr. Earl Dreeshen: That's great, as long as people will let us use it.

Thank you.

Hon. Pierre Poilievre: Is it my turn, Madam Chair?

The Chair: Actually, Mr. Poilievre, you're out of time. That was the five-minute round. My apologies.

We'll now go to MP Erskine-Smith.

You have five minutes.

Mr. Nathaniel Erskine-Smith (Beaches—East York, Lib.): Thanks very much, Chair.

For a moment I think maybe Pierre thought he was a Liberal. We all have those moments.

My question is for Clean Energy Canada, as a starting point. It's specifically in relation to training.

We heard from a previous witness that when we look at the total expenditures in the government's green recovery plans to date, that training is not really keeping pace. We heard from Céline Bak that 15% of the total spend typically is, and ought to be, focused on training.

Can you speak to that aspect of the Canadian plan? Is that, in your view, an area that is underdeveloped and needs greater investment?

Mr. Mark Zacharias: It's a good question.

I am not aware if Canada is in front of, behind or equivalent to other nations in terms of training a workforce that's going to be aligned with the green economy.

I know provinces and territories have stepped up their game over the last several years to make sure there are programs that will support where a new economy is going. I'd be happy to take that offline and provide you some information on it.

Mr. Nathaniel Erskine-Smith: Yes, anything you can send to the committee as a follow-up in writing would be appreciated.

My second question is about buildings.

In past testimony, we have focused on buildings. Specifically, the government moved forward in the recent budget with a $4.4-billion plan for home retrofits. How that will layer onto existing municipal plans, at least here in Toronto, remains to be determined.

When we look at the focus on commercial buildings—we see that from the Canada Infrastructure Bank—we don't really see the scale of investment required, from what I can tell. I am curious about your thoughts on this for public buildings and community buildings. There is a very modest fund to this extent. As it relates to retrofits, do you think there is much more work that needs to be done?

Mr. Mark Zacharias: Yes and no.

Buildings produce 12% of Canada's total emissions. Compared to oil and gas at 26%, or transportation at 25%, that's much smaller, but it's still material.

I agree with you, the $4.4 billion in terms of the home retrofit loans will go a long way to help buildings.

I think provinces and territories do have provincial or territorial incentives. They vary across Canada in all landscapes.

I would agree there is more work to be done. It's not immediately clear to me exactly what that work would be or where the highest return on investment would be, both from a geography perspective and with regard to the type of building.

Mr. Nathaniel Erskine-Smith: When it comes to public buildings, and I'll use the example of school buildings across this country, in many cases, they seem to be quite old. Municipalities and school boards might need financial support to do that kind of work on them. Are there gaps along those lines or would you say it is uncertain at the moment?

Mr. Mark Zacharias: It's uncertain at the moment. There is a lot of evidence that building retrofits are high cost and have lower GHG benefits, on random.

There is an employment component that is very important to it. There is also a jobs and training component that's very important. Again, we'd be happy to follow up with you on that.

Mr. Nathaniel Erskine-Smith: With the remaining time I have, can you tell me where the key gaps would be? If you say “uncertain” as it relates to training and “uncertain“ as it relates to buildings, what is the missing piece in the healthy environment, healthy economy and the updated budget 2021 plan that builds on past work from the pan-Canadian framework? What is missing that we need to tackle going forward?

Mr. Mark Zacharias: Right now, transportation is 25% of Canada's emissions. They are going up as more Canadians buy larger and heavier vehicles. SUV sales are going up. There is an opportunity there first to look at light-duty vehicles. We believe there would be great value in having a light-duty vehicle sales mandate across Canada, much like they have in Quebec and B.C. That would be a huge first step.

Mr. Nathaniel Erskine-Smith: Would this mean moving from a voluntary to a mandatory system?

Mr. Mark Zacharias: Yes, it would be much like California, most of the countries in Europe, British Columbia and Quebec have already done. It becomes mandatory. You would have sales targets that scale up over certain years.

The next move would be into the medium- and heavy-duty vehicle space. We move a lot of goods across Canada with fossil fuels and there are huge opportunities for electrification. California is also starting to lead North America in terms of medium- and heavy-duty vehicles.

Canada has the added advantage, potentially, of building them here. Zero-emission vehicles are already being built in Canada. More could be built. A mandate would help that.

● (1255)

Mr. Nathaniel Erskine-Smith: I was going to ask you what you might do to tackle the 26% that is oil and gas, but you have 15 seconds and I expect the answer will take a little longer than that.

I appreciate your comments and your time.

Mr. Mark Zacharias: That's great. Thank you.

The Chair: Thank you very much.

That ends our third round for today. I know we are a little bit before time, but we've been really good on time today, so I'd like to thank all of our witnesses for being with us today. It was excellent testimony.

For the members, if you haven't had a chance, on Friday you received a working paper from the analysts, “A Mineral Intensive Future: Challenges and Opportunities for Canada”, which highlights a little bit of what we heard at the last meeting as well as this meeting. I highly recommend you give it a read. I think it will be very helpful with respect to this study.

With that, I want to thank the witnesses again for being with us, as well as our analysts, our clerk, our IT crew and, of course, our incredible translators, without whom we couldn't be doing what we're doing. Thank you, everyone, for an excellent meeting.

With that, the meeting is adjourned.