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• (1635)

[English]

The Chair (Mr. George Chahal (Calgary Skyview, Lib.)): I call this meeting to order.

Welcome to meeting number 75 of the House of Commons Standing Committee on Natural Resources.

Today we meet to resume our study of Canada's clean energy plans in the context of the North American energy transformation. We will then proceed to sit in camera to discuss committee business.

Since today's meeting is taking place in a hybrid format, I would like to make a few comments for the benefit of members and witnesses.

Please wait until I recognize you by name before speaking. For those participating by video conference, click on the microphone icon to activate your mike, and please mute yourself when you are not speaking. With regard to interpretation, for those on Zoom, you have the choice, at the bottom of your screen, of floor, English or French. Those in the room can use the earpiece and select the desired channel. I will remind you that all comments should be addressed through the chair. Additionally, screenshots or taking photos of your screen are not permitted.

In accordance with our routine motions, I am informing the committee that all remote participants have completed the required connection tests in advance of the meeting.

I'll be using these two lovely cards. This one is a 30-second warning for speakers, and the red card indicates that time is up.

Now, prior to proceeding with opening remarks, I'll go to Mr. Angus.

Mr. Charlie Angus (Timmins—James Bay, NDP): Thank you so much, Mr. Chair.

I just want to get some clarification. It's been four months since our committee passed a motion asking Mr. Jackson Wijaya to appear. There was discussion on whether we needed to issue a summons for him to appear. My understanding is that there were negotiations, but four months is a very long time.

We have been approached by Paper Excellence to go have drinks with them at the Métropolitain. We've been told that we can look at some of their documents. They've asked us to keep them all in confidence, and we've agreed to all of that. However, we have not had Mr. Wijaya.

We don't know how this company is structured. We don't know the relationship with Asia Pulp & Paper. We don't know the Sinar Mas group and whether it's a family business, but it holds massive holdings of Canadian equity right now.

I want to know whether or not a summons will need to be issued, whether Mr. Wijaya is willing to come or whether they've just decided that our committee is something that they're not paying attention to. I think it would send a very wrong message to the people of Canada if our committee is unable to finish this study.

The Chair: Thank you, Mr. Angus.

I'll ask that the clerk provide us with an update.

The Clerk of the Committee (Mr. Patrick Williams): Thank you, Mr. Chair.

I followed up with Paper Excellence last week and was informed, in writing, on September 27 that it had declined the invitation for Mr. Wijaya to appear.

Mr. Charlie Angus: To that end, Mr. Wijaya is in control of major Canadian resources, and he is declining to appear before our committee to explain how his company is structured. Is that what I just heard?

The Clerk: I received only a written confirmation that he has declined the invitation to appear.

Mr. Charlie Angus: Okay. Thank you.

I won't take any more time, but we will be issuing a summons, or asking the committee to consider a summons, because I think that is an absolute disrespect to Parliament and a slap in the face, particularly to people who are dependent on natural resource communities. We want to make sure that we have a good corporate partner and not one that thinks that it can just buy up assets and ignore us.

I will be putting forward a motion, and we can discuss it later.

Thank you.

The Chair: Thank you, Mr. Angus.

We'll now welcome the witnesses who are with us this afternoon.

From ARC Financial Corp., we have Peter Tertzakian, managing director. From Canadians for Nuclear Energy, we have Christopher Keefer, president. From the Canadian Nuclear Association, George Christidis, vice-president, government relations and international affairs, is with us. From the Canadian Renewable Energy Association, we have Fernando Melo, federal policy director. From Electricity Canada, we have Michael Powell, vice-president, government relations; and Terry Toner, senior fellow.

Thank you for taking the time to appear today.

Each witness has up to five minutes for an opening statement. We will begin with Mr. Tertzakian.

Welcome to the committee. You have the floor, sir.

Mr. Peter Tertzakian (Managing Director, ARC Financial Corp.): Thank you for the opportunity to present. I've been in the investment business, focused exclusively on energy, for almost 30 years. The lens I will present through is from the perspective of decision-makers who allocate investment capital, whether it's here or in the United States, Europe or abroad.

To set the stage, the job of a decision-maker in investing capital is to quantify the expected return of an investment—in other words, the amount of money to be made on that investment—and then to quantify the associated risk, or the probability that the return will be achieved. Assessing risk and return is the job of an investor.

I will go straight to my conclusions and recommendations. Canada is weakly competitive in attracting capital for clean energy and broad decarbonization. In fact, it is potentially more serious than that: Canadian investors of private capital lean toward financing American clean energy projects instead of domestic ones. In other words, Canadian capital is leaking to go finance American net-zero aspirations.

The root problem is not that our policies are necessarily financially inferior—in other words, the return side of the equation. It's that they are complex and dense and make it difficult for financial analysts, like me and others, to properly assess the risk. The solution lies in consolidating and simplifying our energy policies, not adding complex new ones to try to facilitate the goal of financing net zero by 2050.

I have spent the past five years working on how to quantify the risk of energy policies, from an investor's perspective, to finance any kind of energy project. My work has led me to the conclusions above, though the question of why sophisticated investors favour the United States over Canada is actually quite simple. Two quotes from famous investors come to mind, from Warren Buffett and Peter Lynch, respectively: "Never invest in a business you cannot understand" and, as Mr. Lynch said when talking about making an investment, "you ought to be able to explain why in simple language that a fifth grader could understand, and...won't get bored."

Generally speaking, incentives for investing in decarbonization projects and clean energy under the U.S. IRA are simpler and straightforward, and there's greater clarity. For example, a solar panel manufacturer in the United States will be paid a simple payment for every kilowatt of capacity produced. A developer of carbon capture and sequestration projects receives a payment for every ton of carbon dioxide removed.

In Canada, incentives are generally tax-based, which makes them more complicated to model in a spreadsheet. Policies that have complicated, output-based performance systems and then surrogates and affiliated provincial-level policies just tend to make them very complicated to analyze. That's not to say that Canadian offerings are necessarily less lucrative, depending on the investment.

They are just more difficult to understand, especially from a policy risk perspective.

However, the complexity of Canadian energy policies is amplified by what I call the layering, chaining and clashing of policies across energy systems. For example, carbon taxes for heavy emitters are layered with many layers of policy, often federal stacked on top of provincial. Then policies are chained. For example, a carbon tax on a producer of natural gas is chained with the spectre of emissions caps and looming clean electricity regulations on natural gas power plant operators that then go buy that natural gas. Again, there are many layers on top of the chained policies at federal and provincial levels.

That may provide satisfaction to those who want to heavily burden fossil fuel energy systems. However, the consequences spill over into confusion in the financing of clean energy projects that we want. Canadian policy architecture is such that it is based on heavy emitters financing clean energy projects through carbon markets, yet private investors are less likely to invest in clean energy projects here because of the uncertainty of carbon markets. Our carbon markets are fragmented in this country. They are opaque and difficult to understand. Volatility of carbon pricing can't be assessed by an investor because of the lack of trading data that is public. In Europe I can access carbon prices on my mobile phone. Canadian carbon prices are inside a series of black boxes. Investors don't invest in black boxes or anything that's dependent upon a black box.

Further, if an investor doesn't have confidence that there will be buyers of carbon credits for clean energy projects, then their default will be to not invest in that clean energy project, or their default will be to pass on a Canadian project and find an investment in another jurisdiction, like the United States, that's easier to understand and where there is perceptually less risk in that project.

• (1640)

I have been to many boardrooms in some of the biggest financial institutions and corporations in the country. The common refrain is "policy is the number one risk", followed by "if I don't understand it, my default is not to invest"—

• (1645)

The Chair: Mr. Tertzakian, if you could, please wrap up.

Mr. Peter Tertzakian: Density, complexity and opacity drive risk aversion and drive investment capital to jurisdictions where there's—

The Chair: Mr. Tertzakian, I'm sorry to cut you off. We're just over the time. We can have our colleagues ask you some questions when the rounds start. Thank you for your introduction.

We will now move to Canadians for Nuclear Energy and Mr. Christopher Keefer, president, for five minutes.

Dr. Christopher Keefer (President, Canadians for Nuclear Energy): Thank you for the opportunity to discuss Canada's response to the Inflation Reduction Act and why nuclear is essential to achieving a just transition for fossil fuel workers.

My name is Chris Keefer. I'm an ER doctor and president of the grassroots advocacy group Canadians for Nuclear Energy. Our organization led the campaign to refurbish the Pickering nuclear station, which will save over 3,000 unionized jobs in the green energy sector.

We find ourselves at an important historical moment. Canada is working out its response to the Inflation Reduction Act, which is mobilizing over \$600 billion of climate action investments. Tied to these investments are provisions that attempt to ensure that the clean energy transition creates high-quality employment for displaced fossil fuel workers. These measures include prevailing wage legislation and incentives to use registered apprentices and a union workforce.

Why are these provisions necessary, and will they work? In the words of New York Times labour reporter Noam Scheiber, "the green economy is shaping up to look less like the industrial workplace that lifted workers into the middle class in the 20th century [and more like] an Amazon warehouse...grueling work schedules, few unions, middling wages and limited benefits".

A University of Massachusetts study estimates that average salaries and benefits within the renewable energy sector are 36% lower than those within the fossil fuel industry. What explains these differences? Jim Harrison, the director of renewable energy for the Utility Workers Union of America, says, "It's a lot of transient work, work that is marginal, precarious and very difficult to...organize." Two-thirds of jobs are low-skilled and most are non-union. This statement is backed by data. According to Statistics Canada, unionization rates in wind and solar are only 13%, compared with 54% in the fossil fuel industry and 84% in the nuclear industry.

Another challenge is the lack of domestic jobs in the wind and solar supply chain. According to data from the International Energy Agency, China controls every major stage of the wind and solar supply chain. For example, 97% of solar wafers and 79% of the world's polysilicon are produced in China, much of it using forced Uyghur labour in Xinjiang province, where the Canadian Parliament voted 266 to zero that a genocide of the Uyghur people was taking place.

The Inflation Reduction Act is attempting to reshore some of these industries and the resulting jobs, but can we subsidize these supply chains back to North America at scale? You can print money and offer tax credits, but you can't print the cheap coal-fired energy, forced Uyghur labour and lax environmental standards that give China a near-unassailable competitive advantage in the wind and solar supply chain.

The challenges are real, but there is a bright path forward for a made-in-Canada just transition, and it is nuclear. Ontario provides a fascinating case study of a clean energy transition without any sacrifice in income or benefits for energy workers. Our nuclear-powered coal phase-out began in 1973, when instead of continuing to build more massive coal stations, we turned to CANDU nuclear re-

actor technology and commissioned 20 large reactors in just 22 years, which today provide nearly 60% of Ontario's electricity carbon free. This resulted in a just transition for Ontario's coal workers, many of whom moved into higher-quality jobs in the nuclear industry, which has the highest unionization rate in the energy sector of 84%.

Beyond the power plants, Canadian nuclear boasts a hyperlocalized 96% made-in-Canada supply chain employing 76,000 people. This generates an unprecedented economic multiplier effect. There's a return of \$1.40 in local economic activity for every dollar invested in CANDU nuclear.

If we are going to imitate the Inflation Reduction Act and spend hundreds of billions of dollars on a clean energy transition, we have a choice to make. Do we spend that money right here at home in Canada on nuclear, the ultimate economic multiplier, or do we generate an epic trade deficit by sending money to a foreign supply chain and emerging geopolitical adversary?

The Inflation Reduction Act recognizes the vital role for nuclear energy. It provides a 30% investment tax credit for new nuclear projects and up to 50% if a nuclear plant is built on an existing industrial site and uses union labour and a domestic supply chain. Canada is following suit, albeit with a much more modest investment tax credit of 15%.

Beyond finance, what is the greatest barrier to Canada unleashing its nuclear potential? Ironically, Canada's burdensome environmental impact assessment process poses one of the greatest threats to our environment by delaying the construction of green energy infrastructure, such as new nuclear plants, which are vital to our climate response. This government has committed to net-zero electricity by 2035, yet the environmental impact assessment process is expected to take around seven years, or until 2030, to complete. This is clearly not in line with the urgency of the task at hand.

To be very brief, our recommendations are therefore to streamline the environmental impact assessment process for nuclear on brownfield and existing nuclear sites, and to match the American investment tax credit for nuclear, recognizing its unique economic multiplier effect.

● (1650)

Thank you very much.

The Chair: Thank you. You're right on time.

We'll now go to Mr. George Christidis from the Canadian Nuclear Association.

You have five minutes.

Mr. George Christidis (Vice-President, Government Relations and International Affairs, Canadian Nuclear Association): Thank you very much for this opportunity on this important conversation we're having today.

My name is George Christidis, and I am vice-president of government relations and international affairs at the Canadian Nuclear Association.

I would like to start off by acknowledging that we are on the unceded territory of the Anishinabe Algonquin people.

To begin with, the CNA is a non-profit organization representing over 100 members across the nuclear industry, everything from nuclear utilities, uranium mining, suppliers and the supply chain. The Canadian nuclear industry employs over 76,000 Canadians in highly skilled jobs across the country.

Nuclear technologies are essential in Canada's economic and social economic development. It is clear from an international and domestic perspective that the transition to a clean energy system requires more nuclear. This increasingly includes the discussion of large nuclear technology, CANDU, as well as small modular reactors.

Canada's nuclear industry is a strategic asset to attain clean energy transformation. There can be no transition to net zero without a role for nuclear industry or nuclear technologies. In Canada it's based on a proven track record with its CANDU technologies and supply chain that is second to none in terms of capability, safety and reliability. Canada's nuclear industry is also a leader in nuclear waste management, and its efforts towards a long-term solution for nuclear waste of by-products are seen as a model in international forums.

Nuclear technologies provide a pathway for indigenous reconciliation, offering technological solutions and options for willing communities to consider as they look at their own plans for economic and social development.

Canada, the United States and other key countries have included nuclear in their clean climate policies as well as energy security goals. We applaud the efforts and encourage continued support for the nuclear industry that has been shown by the Canadian government. We specifically applaud the Canadian government's efforts of including the investment tax credit's nuclear definitions, as well as increasingly including nuclear in clean energy definitions.

Moving forward in terms of Canada, it's really about building out on this CANDU technology and the supply chain that is second to none and looking at building on the refurbishment in Ontario—\$26 billion of CANDU refurbishment on major projects undertaken by Ontario Power Generation and Bruce Power, which are on time and on budget.

The recently announced Canada-Romania \$3-billion loan guarantee to support Romania's climate and energy security needs is an example of the benefits that this technology can provide both domestically and internationally.

On SMRs, Canada has a very good story to tell. Ontario Power Generation is working with U.S. partners such as Tennessee Valley Authority and utilities overseas such as Synthos in Poland to look at SMRs as a viable option to reduce emissions and, again, enhance energy security.

There is an important relationship that builds on other parts of our nuclear supply chain, which includes uranium supply to the U.S.A. and other markets that are looking at delinking from Russian sources.

The recognition of the fact that Canada and the U.S. are both competitors but also complementary in terms of some of the policy areas has to be considered. Canada and the U.S. need to work more closely together. The Trudeau-Biden statement and the agreements made between the Department of Energy and NRCan are good foundational points that reflect this relationship.

Moving forward, we echo the statements made that we need to look at the regulatory regime as a means of accelerating the deployment of all clean energy technologies in order to meet climate goals as well as energy security goals, which include nuclear, both large and small.

We also recognize and encourage the further refinement of investment tax credits to reflect the principles of the Inflation Reduction Act in the United States and, specifically, taking a look at the ITC as being broadly applied to Canadian supply chains so that it does not preclude access to other clean financing programs such as loan guarantees from the CIB and so that the ITC recognizes the complexity of the nuclear refurbishment programs and the way that they're essential as part of the clean energy transition and does not arbitrarily exclude projects set on set dates.

With that, I thank you very much.

● (1655)

The Chair: Thank you, Mr. Christidis, for your opening.

We will now go to the Canadian Renewable Energy Association with Mr. Fernando Melo.

Mr. Fernando Melo (Federal Policy Director, Canadian Renewable Energy Association): Thank you.

Good afternoon, Chair, and thank you for inviting me to testify on behalf of the Canadian Renewable Energy Association as part of this committee's study.

I would like to start by acknowledging that I am joining you today from the traditional and unceded territory of the Algonquin Anishinabe people.

CanREA is the voice for the wind energy, solar energy and energy storage solutions that will power Canada's energy future. Our 350-plus members are uniquely positioned to deliver clean, low-cost, reliable, flexible and scalable solutions for Canada's energy needs.

This committee's study is timely, as Finance Canada is wrapping up consultations on one of its key policy responses to the U.S. Inflation Reduction Act: the clean technology investment tax credit. CanREA and its members are very optimistic about the opportunities this investment tax credit will create. This measure will allow companies, investing in a variety of low-carbon technologies, to recoup between 20% to 30% of their project capital costs as a refundable tax credit.

When the enabling legislation for this ITC is passed, it will rapidly accelerate the deployment of technologies like battery energy storage systems, wind and solar across Canada by strengthening the economics of these renewable energy projects.

These ITCs will not only accelerate the deployment of new renewable energy projects but they will provide real benefits for Canadian communities. This refundable tax credit will reduce deployment costs, allowing developers to pass along their savings, which should lower the price of electricity. The prevailing wage provision will also support the creation of good, well-paying jobs as turbines and panels are deployed in each and every province.

Perhaps the only thing these investment tax credits do not do well is support indigenous communities' efforts to develop renewable energy projects. We would encourage the Canadian government to remedy this. CanREA and its members have made reconciliation with indigenous peoples a priority, developing clean energy projects in partnership with first nations, Métis, and Inuit communities across Canada.

Utilities and system operators are also on board, requiring indigenous partnership and project ownership to participate in upcoming tenders. This is why Canada must include indigenous entities in the clean technology investment tax credit at the same rate as taxable entities. This is a simple legislative change that needs to be made.

We recognize that the federal government has stated it will include indigenous entities in the forthcoming clean electricity investment tax credit, which is valued at 10% to 15% of capital costs, but simply put, this is not equal treatment for our indigenous partners. It means indigenous communities cannot claim an ITC of equal value to that claimed by their taxable partners. This inability has created a serious concern that the ITCs will reduce indigenous opportunities to finance project participation with favourable terms. Un-

equal access to the ITCs for indigenous partners must be remedied if economic reconciliation and projects are to move forward.

Secondly, CanREA wants to stress the importance of investing in electricity transmission. The building of new projects, funded partially by this proposed ITC, will help to supply the increased demand for electricity associated with the electrification of more and more aspects of Canadian lives. Some studies suggest that electrification will result in electricity demand growing anywhere from two to three times by 2050. This new generation will need to be connected to the grid with new transmission lines, a potentially massive undertaking that could prove costly to the ratepayer.

While renewable generation is a low-cost option that may in many cases reduce the cost of electricity, long-term capital-intensive investments in transmission infrastructure may not have a similar downward pressure on electricity rates.

Given that the need for new transmission is likely to be accelerated by the demands of reaching net zero, we believe there is a role for the federal government to play in supporting these investments. We note that, in the U.S., the Inflation Reduction Act provides close to \$4 billion U.S. in programs that support electricity transmission. Here in Canada, it is important that incentives, supporting the deployment of both interprovincial and intraprovincial transmission lines, are put in place so that more clean power can be connected to the grid.

It is for these reasons that CanREA recommends two modifications to the planned ITCs. First is to allow indigenous communities to access the clean technology investment tax credits, and the second is to provide incentives supporting the development of transmission lines across Canada.

Thank you for your time. I look forward to your questions.

● (1700)

The Chair: Thank you for your opening remarks.

We will now go to Electricity Canada with Michael Powell and Terry Toner.

Mr. Michael Powell (Vice-President, Government Relations, Electricity Canada): Thank you, Mr. Chair.

I would also like to acknowledge that we're gathered on the territory of the Anishinabe Algonquin people.

Joining me, as the chair said, is my colleague Terry Toner, who is a senior fellow with Electricity Canada and joins us after 42 years at Nova Scotia Power.

We're an association whose members generate, transmit and distribute electricity in every province and territory. We do it with all kinds of power, and we have that relationship with the customer right up to the meter on the side of their house.

The next 20 years are going to be about how electricity drives emissions reductions across the economy. All told, as Fernando said, we're looking at needing two to three times as much power as we produce now by 2050. What will it take to do that? It's going to take all of the above. We're going to need more power of all kinds, more hydro, more renewables, more nuclear and more transmission and upgrades to the distribution system with innovative solutions.

How are we going to do it? To be successful, we have to get moving quickly, and we need the right mix of policy and regulatory tools to get building. The measures that were introduced in budget 2023 and in the fall economic statement in 2022 are a big step in the right direction and are part of the response. They are a recognition that there's a federal role to play in this. However, there's more work to be done to be sure these measures are as clear and predictable as promised, so that our members can get moving.

Let's talk a little bit about the investment tax credits. I will echo some of the things my colleagues have spoken about. We want to flag a couple of issues. We've made these comments to finance.

The first is that we think Canada should remove the jurisdictional net-zero requirement for the clean electricity investment tax credit. It risks slowing the access to supports for projects that are able to get ready today for reasons that are outside of proponents' control. If a project is clean and meets the work terms, it should be getting going.

Second, the government should ensure that there is equal treatment for equal technologies between the clean electricity and clean technology ITCs, with an aim to harmonize the level of support between the two.

Third, the clean electricity ITC supports transmission between provinces—interprovincial—but we think there's a need, as we build out, for additional transmission within provinces and there's a role for the ITC to include focused transmission within the provinces—intraprovincial—as well for key distribution improvements that allow for the modernization of the grid.

Finally, we want to make sure that worthwhile projects and projects that meet the definitions don't lose out on the value of the ITC for reasons beyond their control. The apprenticeship requirements under the labour provisions are an example of that. Canada's tough labour market means that there just might not be enough ap-

prentices available—period. We recommend, as in the U.S. under the IRA, that there be a good-faith effort exemption to allow for this.

In terms of certainty, the budget talked about the role of carbon contracts for difference, which are a tool that offers policy certainty for investments over the long term, minimizing the “stroke of the pen” risk of changes in the future. It's important that those get moving very quickly to get things going.

Finally, after the financing, how do you actually get building on things? A few years ago, the World Bank ranked Canada 64th in terms of ease of spending and obtaining construction permits. This past year, we had Dunsky Energy + Climate Advisors interview stakeholders from across the country to identify barriers to getting things built. They found five.

The first is that the planning process isn't aligned with the challenges at hand. The second is that there are overlapping regulatory and approval processes. There's also limited capacity with approval bodies and an ongoing shortage of skilled labour and access to capital.

To address these, we suggest that the government move forward with the “one project, one approval” framework as described in the budget, coordinate federal project permitting within a central government agency and not across however many budgets there are, and build regulatory capacity to deliver on net-zero goals.

Penultimately, I'd be remiss if I didn't quickly discuss the draft clean electricity regulations, which sit in the background as we think about building. As you know, we're still in the midst of the public comment period, and Electricity Canada will be submitting detailed comments. However, just at a high level, it's worth underlining that our members have not found that the regulations as drafted will be workable. There will need to be much more flexibility in the final regulations to allow for the affordable and reliable operation of the grid. Obviously, the draft isn't final, so there's work for us to do.

• (1705)

I'll conclude just by emphasizing that, in August, Minister Wilkinson announced the need for a Canadian electricity strategy. When our members are deciding to build a project, they look at everything, what's involved in the whole picture, as Peter talked about at the beginning. It's important, as we think about the government tools, that we take a similar approach and really focus on making sure we build a strategy that mixes all of these things so that when billions of dollars are invested in projects that could last half a century, we are a good fit there.

Thank you, Chair.

The Chair: Thank you to everybody for providing testimony to us today.

Before we begin the rounds of questions, I want to acknowledge Mr. Sheehan online, and the Honourable Marco Mendicino for joining us at committee today. Thank you.

For the first round, we'll go to the Conservative Party of Canada.

Mrs. Shannon Stubbs, the floor is yours.

Mrs. Shannon Stubbs (Lakeland, CPC): Thank you, Chair.

Let me just say at the outset that I really wish each and every single one of you could have an entire day to talk about these things, although I suppose it should surprise no one that representatives of organizations for whom this is literally their expertise are actually concerned about the links between policies and real outcomes.

Also, all Canadians in every province and in every region care deeply about the environment, want to reduce emissions and also want to ensure they have reliable, stable, affordable, accessible energy for their daily needs while this country also accelerates and leads on clean tech and innovation. Given that fact, I just want to put a fine point on how important this discussion is and thank each and every one of you for being here.

Peter Tertzakian, I wonder if I could give you the opportunity to finish your concluding remarks. I would appreciate, for the benefit of all Canadians, everybody here on this committee and policy-makers, your expanding on the issues you were talking about, with layering, chaining and pancaking policy frameworks.

Mr. Peter Tertzakian: Thank you very much.

I come back to the notion that simplicity is the ultimate sophistication here, and that has to apply to our energy policy landscape if we're to have any hope of attracting enough investment to achieve our net zero by 2050 ambitions. We need to be able to attract investment, not actually have money leave this country to finance other countries' net-zero ambitions, which is what we are at risk of doing, and I would argue that is already happening.

Instead of layering more potential policies at both provincial and federal levels, we should be considering consolidating and simplifying the policies we have.

The proposed clean electricity regulations are an example of layering a carbon policy on top of an already complicated and opaque carbon policy, which is the Greenhouse Gas Pollution Pricing Act. I would ask you to ask yourselves why it is necessary to have two

carbon policies stacked on top of each other, when we haven't given the base carbon pricing policy a chance to work. Why don't we just simplify the GGPPA, the Greenhouse Gas Pollution Pricing Act, harmonize it with the provinces, and make the markets transparent and allow them to work?

I would conclude by saying that it's really imperative we get greater transparency in our carbon markets. The federal Greenhouse Gas Pollution Pricing Act is governed by the CATS system. Recently I asked someone in my group to get a price history of carbon pricing. The answer we got back was, "Sorry, we can't give that to you." What investor is going to be able to determine the volatility of carbon prices if the carbon trading prices are not available to analyze for volatility?

I'll be brief and end it there.

Mrs. Shannon Stubbs: Thank you. One does wonder.

One does also wonder how goals are going to be achieved in 11 years when it has taken more than 100 to get where we actually are. If we're honest about it, looking at requirements for the doubling or tripling of a grid with no answers about how it's going to be paid for and how that's actually all going to happen.... To that end, I do invite representatives of Electricity Canada, or anyone else who wants to, to expand on these issues relating to policy contradictions, layers, pancaking and any other barriers we ought to be alive to and remove for private sector performance to be able to achieve these stated policy aims.

We'll start with Electricity Canada and then anybody else who would like to add to that, please do.

• (1710)

Mr. Michael Powell: I'll just kick off by saying that there's.... I talked at the end about the need for a Canadian electricity strategy, a clean electricity strategy. If we look at the goals that we've set for ourselves in terms of electrifying other parts of the economy—buildings, cars, industrial processes—and how we build out the grid to support that, there are a lot of moving pieces all at once and we need to make sure we have the whole picture.

When we look at the supports that the government has provided, we have to make sure that they are there and that they are clear and predictable. We've made some suggestions about how they can move forward.

We have to look at how we can get building. We released a report earlier this year called "Build Things Faster", which identifies some of those challenges, where the barriers are and how we make sure we have a clear set of rules.

Finally, our sector is 84% non-emitting right now. That hides differences between regions. We've reduced emissions by more than half since 2005, more than any other sector in Canada in all of Canada's emissions reductions to date.

I think we just need to make sure that we're focused on building out and building on that success to drive reductions elsewhere in the economy.

Mrs. Shannon Stubbs: In 20 seconds, can I just urge each and every one of you to also continue to contribute to this conversation but to make sure that you submit substantive written submissions for all of these points, because it's so critical for public policy-makers and the politicians who make these promises and targets to actually be able to show you how it will be delivered to all Canadians. Please do submit written material after.

I'm sorry, Chair. Thanks for your indulgence.

The Chair: Thank you.

We will now move to Viviane Lapointe from the Liberal Party of Canada for six minutes.

[*Translation*]

Ms. Viviane Lapointe (Sudbury, Lib.): Thank you, Mr. Chair.

[*English*]

Mr. Christidis, in your opening statement you said that Canada and the U.S. are both competitors and collaborators.

Can you expand on that statement you made as it relates to the Inflation Reduction Act?

Mr. George Christidis: Thank you for the opportunity.

From the nuclear perspective, obviously we often have different technologies at play, but in some of these spaces—for example in the small modular reactor space—we are actually finding there's an evolution of a new continental approach to some of these technological supply chains so that they are actually finding themselves working closer together, or will be, not only in the Canada-U.S. dimension but also in third markets.

I used the example of OPG's work that involves the Tennessee Valley Authority and that also links Poland. There's the creation of a new market around small modular reactors, and the government has done quite a bit in supporting that effort overall.

At the same time, there is competition—on large reactors for example. We have a CANDU-based technology here in Canada and the U.S. has its own, but because of the climate crisis and energy security concerns, Canada, the U.S. and other like-minded countries are increasingly looking at working together.

I just attended a meeting at the Nuclear Energy Agency of the OECD in Paris where Minister Wilkinson and his colleagues declared that there's going to be a need for more nuclear. There's going to be a bit of a competition—the French have their technologies, the Americans have their technologies and the Canadians have their technologies—but ultimately you're going to need more clean energy to attain those kinds of goals. Nuclear, large and small, will be part of that.

There is a geopolitical dimension. The geopolitical dimension here in Canada is sometimes misunderstood—not necessarily in this room but in the public—because thankfully the war is very far away. When you go to those spaces, you realize that energy security is fundamentally the driver—along with the climate—in making these decisions happen. Canada, the U.S. and other like-minded countries have to work together.

I want to add a supplementary example of that. We were in Saporo at the G7 meeting, again with Minister Wilkinson, and G5 countries signed an agreement looking at developing the Canadian nuclear option in terms of technologies and uranium and nuclear fuel to delink from Russia.

Therefore, we as Canadians have a choice to make. Is there a climate crisis, yes or no? Nuclear has a role. Is there an energy security issue at play, yes or no? Nuclear has a role. That's the dimension and there is a competitive notion because there are different technologies at play.

● (1715)

Ms. Viviane Lapointe: To get to nuclear energy, we need to acknowledge the critical role of uranium mining in that process. Uranium is included in the list of Canada's critical minerals. Included in our critical mineral strategy is a focus on job creation and investment.

My question to you is the following. On the road to clean nuclear energy, starting from the extraction and processing of raw materials, what is needed for your member organizations to feel secure in investing in production here to keep the process as much as possible here in Canada?

Mr. George Christidis: Thank you for that question.

Maybe I read my statement a little fast because I was worried about the time.

Certainly, Canada is a leader in uranium mining. Cameco is an example of a great company providing a lot of jobs in northern Saskatchewan. Indigenous communities are part of their efforts in terms of jobs and the procurement processes they have.

In terms of the uranium mining perspective per se, and I would say, as an industry as a whole, it really comes down to certainty around the regulatory regime to some extent and making sure the regulatory regimes in place reflect the need to accelerate the deployment of clean energy, including the sourcing of these critical minerals.

I think it's just a recognition that, as the government and as parliamentarians are looking at these regulatory processes, they have in mind how the need to accelerate the deployment and the development of these resources is really important. I do think the Trudeau-Biden statement reflects that, if you go back to a founding document on that discussion.

Ms. Viviane Lapointe: Mr. Keefer, you're a well-known supporter of nuclear energy. I want to take this opportunity to thank you for your advocacy on nuclear power.

In terms of the U.S.'s Inflation Reduction Act, we're hearing that government investment and funding is key. In your opinion, what does the federal government need to do or what legislation would be required to facilitate access to funding for existing or new projects?

How can we attract private investment?

Dr. Christopher Keefer: First off, I would say that there is a lot of interest amongst private investors. Both OPG and Bruce Power had green bonds that were put out in the last couple of years for over \$500 million. They were more than five times oversubscribed.

One form of our advocacy has been a parliamentary petition, which was working to include nuclear within the federal green bond. This was about a year and a half ago. Unfortunately, at that time nuclear was listed alongside some of the sin stocks. That was the justification for the exclusion. That is out of date, frankly. There have been big advances. The European Union has come together to recognize nuclear within its green taxonomy. Other countries are falling in line as well, such as South Korea and others.

I think there's a real appetite for private investment to get in on this, but I think we need to send the right signals. In terms of a pragmatic thing the government can do right now, it would be updating that green bond framework to align with some of our international partners to include nuclear within the green bond program.

The Chair: Thank you.

We'll now move to Mr. Mario Simard from the Bloc Québécois.

You have six minutes, sir.

[*Translation*]

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

Mr. Tertzakian, earlier you seemed to be saying that Canada is not attracting capital, and even that capital from Canada is leaving the country when it comes to clean energy. If I understand you correctly, it's the complexity of Canadian legislation that is scaring away clean energy capital. Last week we had other stakeholders tell us something similar about the difficulty of attracting capital to Canada. They told us that certainty was needed to attract capital.

I understand that you are critical of carbon pricing as it currently exists in Canada. However, if we want to attract investments in clean energy, we cannot keep the same model, which focuses solely on fossil fuels. Do you agree with that statement?

• (1720)

[*English*]

Mr. Peter Tertzakian: Thank you.

There are a couple of things you've said that I want to respond to.

First of all, I don't like to generalize overall that Canada doesn't attract investment because there is investment coming here. It's just that we need a lot more if we hope to get to 2050. We need a lot of foreign investment to come in here because the Canadian public purse is insufficient. We need private capital to come in, and we need our own private capital to have confidence and clarity in our policies to be able to invest.

With respect to the price on carbon, I'm not necessarily critical of the price on carbon more than.... I don't know what the price of carbon is, so I can't assess its volatility. Further to that, we have a series of carbon markets in this country that are not harmonized. It's like a whole bunch of different currencies that can't trade between each other, so this is problematic.

In answer to your last question about fossil fuels, bear in mind that heavy emitters, whether they be power plants or fossil fuel companies, are the ones that buy the credits. In effect, they are the ones that are meant to finance the clean energy economy through the carbon markets. It is not in our interest to damage the markets that are the source of the capital that we need so much.

We need public financing to get things going. We need the carbon markets and the heavy emitters to help finance the transition to the clean energy economy, and we need private capital to come in—

[*Translation*]

Mr. Mario Simard: Thank you. I'm sorry to interrupt you, but I don't have much time.

I understand what you are saying, but it seems to me that we need balance. If Canada funds only hydrocarbons, if the majority of its financial support goes to fossil fuels, I don't see how it will manage to develop clean energy, such as wind or solar energy. What do you think?

I would also like to know whether you are aware of the fact that Quebec has its own carbon pricing. There is a carbon market between Quebec and California, and California is probably one of the places in the United States with the largest investments in clean energy.

[*English*]

Mr. Peter Tertzakian: I wonder why we don't have all provinces participating in a unified, harmonized Canadian market, and we have to go to California. That doesn't make any sense to me as a Canadian.

Again, are we funding Californian net-zero aspirations? I hope not, as a Canadian.

With respect to all the money going to hydrocarbons, I don't know of any government programs that are going to fund hydrocarbons.

[*Translation*]

Mr. Mario Simard: I understand completely. I just want to make sure you're aware that Canadian carbon pricing does not apply directly to the United States. You can criticise this; I am fully aware of it.

I would now like to ask you a quick question, Mr. Christidis and Mr. Keefer. In your presentations, both of you said that we need to look at the regulatory regime and simplify the environmental impact assessment process.

I will not hide the fact that nuclear energy scares a lot of people, both in terms of waste management and the costs associated with those technologies. Is there not a contradiction in wanting to reduce the assessments that must be done to ensure that it is safe?

[*English*]

Mr. George Christidis: Thank you for the question. I'll try to answer that.

In terms of the proposed concept of having a much more efficient regulatory system, it's really not made on the concept of saving monies. The Canadian Nuclear Safety Commission is one of the world's best regulators, and it's a quasi-judicial body. Let me repeat that. It's a quasi-judicial body that oversees every step of the nuclear industry, where we are probably one of the most highly regulated industries in the world. I would offer us as a model for any other energy sector in terms of the regulatory requirements we have, which is a good thing from a perspective of ensuring the safe operation of our plants.

What we're suggesting is that, as the government is looking at meeting climate goals, there needs to be consideration, as technologies evolve, of reducing duplications. I think my colleague here talked about some existing locations, or brownfields, where the regulations could be reduced in terms of some of the duplications. As technologies also evolve, there are different safety systems introduced, passive safety systems. The regulations need to reflect that reality. That's really what we're talking about here—an efficiency of the regulatory regime as opposed to any other—

• (1725)

The Chair: Thank you for that.

Six minutes goes fast. We'll have to come back to you, sir, maybe in the next round.

We'll go to Mr. Angus from the New Democratic Party for six minutes.

Mr. Charlie Angus: Thank you so much, Chair.

Thanks, gentlemen, for coming.

What I'm hearing very clearly is clarity, simplicity and certainty. We are dealing with the biggest economic transformation since the Industrial Revolution. We could go at it blind, but we're beside the United States, and that big sucking sound you hear is investment going to every part of the United States.

I want to start with you, Mr. Melo.

For your members, in terms of certainty, one of the important things in certainty is making sure that we have political certainty. I'm looking at headlines: from July 2022, "Alberta is...Canada's renewable energy capital"; from December 22, "Alberta is in a solar...gold rush"; and, from July 9, "\$160 million in new...solar projects" announced in July in Alberta. Then Danielle Smith put on the moratorium and the next headline says, "\$33 billion in investments...at risk".

We now have learned that in two months there has been a 20% drop in solar projects in Alberta. I think that in any industry a 20% drop in two months would be a very serious kick in the face. How do your members see that?

Mr. Fernando Melo: The moratorium in Alberta was a disappointing mistake by the Government of Alberta. We're working with them through this inquiry, as we've been working with them throughout the process. We work with all governments as part of that regulatory process.

As you rightly pointed out, 75% of all renewable investments were made in Alberta last year, because they do have an open framework and things like that. However, putting this pause on there when we've been working on those issues with—

The Chair: I'm sorry. We have a point of order from Ms. Dabrusin.

Ms. Julie Dabrusin (Toronto—Danforth, Lib.): I'm going to jump in because it's about the chirping again when witnesses are speaking.

Witnesses come to speak and to give us their opinions. We hear a lot of different opinions. People may agree with some and people may disagree with others, but when a witness comes to speak I think we need to show them respect and not be chirping at them during the time they're speaking.

Mrs. Shannon Stubbs: Chair, thank you to my colleague for scolding me. I appreciate that.

I did just mention that Alberta has been that leader for decades, of course.

Mr. Charlie Angus: On a point of order, Chair...

Mrs. Shannon Stubbs: I guess if the member wants to talk about political and regulatory decisions by provincial governments instead of how we're actually going to deliver—

The Chair: Mrs. Stubbs—

Mrs. Shannon Stubbs: —on our job federally for all Canadians, that's one thing.

The Chair: Excuse me, Mrs. Stubbs. Mr. Angus has the floor and Mr. Melo is answering a question.

Mr. Charlie Angus: Thank you.

I listen with respect. I find that heckling, insulting and trying to intimidate witnesses is not becoming, so I'd ask Mrs. Stubbs and her party to stop this so we can continue.

I'd like to ask if I can get my time—

The Chair: Mr. Angus, I've paused your time.

Mr. Charlie Angus: I'd like my time back so I could just ask some simple questions.

The Chair: I've paused your time.

I will ask all members to please allow the member to ask the question and for the individual providing testimony to be able to provide their testimony, as a courtesy. Let's all please work together and give everybody the time and respect they've given to be here today.

Thank you.

Mr. Angus, the floor is yours.

Mr. Charlie Angus: I'll continue.

I'm very sorry that this happened to you.

I think the issue I'm asking about is this. I just spoke with people who are in the clean energy business who told me that, when they're looking for investment, the first question they're being asked now is what jurisdiction they're in, because they are not going to get money in a jurisdiction where they can't trust the politics. Is that what your members are hearing?

Mr. Fernando Melo: Our members are hearing that it is very difficult to acquire capital if you cannot build or cannot acquire permits. My members are really hopeful that we will be able to get back to this and get ready to go in February, but yes, my members are often asked where they're going to be deploying capital. It's really important that we have the regulatory and political will to allow us to build.

• (1730)

Mr. Charlie Angus: I asked this question because it is so important when we're looking at an investment of \$110 billion in the United States. We're looking at Texas, where the solar and wind capacity has just exploded.

When you have certainty, investors will invest. What we've been told is that, if the jurisdiction right now is Alberta, they're not willing to invest, because they don't know what uncertainty is coming.

Do we have other jurisdictions in Canada that can pick up the slack? We can't afford to lose this investment to the United States.

Mr. Fernando Melo: I can say that many provinces and system operators are issuing calls for power across this country or are preparing that. I can think of Ontario that has some. Saskatchewan has several, and the Province of Quebec is beginning its process as well. We have a very favourable integrated resource plan coming out of Manitoba that is looking at wind as a possible way to build up their grid and continue to grow.

Mr. Charlie Angus: In Texas again, which is even further right than some of my Conservative colleagues, there are 800,000 clean energy jobs. They got through a brutal heat wave with the air conditioners running full out because they had wind and solar capacity, whereas Danielle Smith rented a truck to drive around Ottawa, saying that the power has gone out. That's not a good way to attract investment. I don't think so. I'm not a Conservative. That's how they think they get it.

I want to ask you.... Texas lowered the cost of electricity for consumers by \$11 billion last year with the switch to wind and solar. Are your members able to provide lower-cost energy for Canadians looking to get renewables on the grid?

Mr. Fernando Melo: If we look at the 2023 Lazard cost of energy report, which primarily studies the U.S. but goes to North America, we see that firmed-up renewable electricity was the lowest-cost source of electricity. That is even lower than combined-cycle natural gas, or peakers, in terms of division.

It will take all forms of energy to get us across the line, but it is showing that when you put renewables, we reduce the prices.

Mr. Charlie Angus: I'm running out of time.

I'm fascinated by the prevailing wage conditions, which are something the New Democrats fought for to make sure that we're getting good union jobs. Your members support the prevailing wage conditions so that we are actually putting good jobs in the field. We noticed that we lost 45,000 in the oil operations because they've gone to automation. We need to replace those jobs.

Do your members support this move for prevailing wage conditions and apprenticeship training?

Mr. Fernando Melo: We are incredibly supportive of those prevailing wages. We are simply asking for guidance for each jurisdiction, as we know there are some complexities in the way it has worked throughout Alberta and Saskatchewan, particularly, and in the way those labour agreements do structure.

Mr. Charlie Angus: Very quickly, on indigenous...what do we need to do?

Mr. Fernando Melo: We need to make sure that indigenous entities, be they communities, companies or individuals, can access an investment tax credit at an equal rate as their taxable partners. It is unfair to list otherwise.

Mr. Charlie Angus: Thank you very much.

The Chair: Thank you, Mr. Melo.

Thank you, Mr. Angus.

It's over to Mr. Dreesen for five minutes.

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

To Mr. Melo, you spoke about the low cost for solar and wind. I suppose this is a good time for me to mention that, whatever it is we use, we should be talking about the energy requirements from the first shovel you use to dig something up to the last shovel you use to cover it up. That is the real cost. It's not just how much energy you can get out of something that you're going to buy at Costco. I think that's the first part.

The other thing is that last week ATCO was here, and I asked them how much money they put aside for decommissioning solar and wind projects once they've outlived their usefulness. This is the question that Albertans were talking to their governments about when they said, "There had better be a moratorium on this, because as landowners, we have no idea what the consequences are going to be, or the costs to the provincial government, the municipalities or the landowners." That is the reason for the pause that we have at this point in time. It seems to be a political football, however, around here.

The first question that I would ask you, Mr. Melo, is what numbers your industry gives those provinces, municipalities and landowners so that they know the cost of reclamation.

Mr. Fernando Melo: I'd be more than happy to speak to the cost of reclamation, sir. We actually have a memorandum of understanding with the RMA, or the Rural Municipalities of Alberta. We are working quite closely with them on this issue and have been for years. I'm very excited to say that we are working on that.

One of the great things about ours is that we build our land lease agreement with landowners. You have to understand that renewable power projects are built with the consent of landowners, and part of that is reclamation and retirement. I can't speak to the individual cost built in.

• (1735)

Mr. Earl Dreeshen: Thank you very much. I would just ask you to speak to the farmers' advocate from Alberta, because this same discussion has come into play but they do not believe that the relationships that you have are strong enough to protect them. Again, this is part of the reason why some of this is being discussed. Hopefully, in five months we're going to have that all sorted out, so everybody can have faith in that regard.

Mr. Tertzakian, some of the things I've been talking about for a long time were mentioned in your testimony. In order to have a level playing field, it's important that industry be aware of and able to discuss the impediments that are faced by Canadian investors compared to their American counterparts.

You spoke of some of those. The U.S. doesn't have a carbon tax. The only significant pipeline, Keystone XL, was cancelled on day one. That's hardly a measure of good faith between our two nations. When we talk about the Trudeau-Biden relationship, it only goes one way.

For the second part, when we talk about currency, as the price of oil went up, we could see something happening with our dollar. Obviously we're out of that game. The U.S. leaders see a business case for LNG exports around the world. We don't. The U.S. global power ranking makes it incumbent on the U.S. to maintain good rela-

tionships with India and other neighbours. These are the sorts of things that we have to consider.

Mrs. Stubbs mentioned earlier that, if there is a way for you to address those issues, get them to our amazing clerk so that we have them. It's not just so that we can take a look at them. These are necessary items for us to put into this report. We can draw from them. We might not be able to ask you the questions here and to get the responses, but it is so important for us to be able to do that because that is how a real report is going to come about.

Mr. Tertzakian, could you discuss a very simple item, which is the difference between investment tax credits and production tax credits? Many of us believe that's the way the U.S. is covering some of the projects.

Mr. Peter Tertzakian: Simplistically, a production tax credit is when every time you produce a unit of something, you get a payment. For a kilowatt of solar power from a solar panel, the United States government will give you a payment of, say, seven cents for a kilowatt as it's produced.

An investment tax credit means that you first have to make the investment—put your money up front—and then get your money back after, by offsetting the taxes you have to pay on your profitability. It's a more complicated way of thinking about it. It doesn't necessarily mean that it's less financially lucrative, but it's more complicated to model, especially when you have the layering, chaining and clashing policies all across the energy system and, on top of that, the uncertainty and volatility in the carbon markets, which are opaque.

The Chair: Thank you, Mr. Tertzakian. I'm sorry to cut you off. We've gone over time. Thank you.

We'll move over to Mr. Sorbara for five minutes.

Mr. Francesco Sorbara (Vaughan—Woodbridge, Lib.): Thank you, Chair.

Good afternoon, everyone. Thank you for your individual presentations. They're very informative.

When we think about the energy and electricity sector, traditionally, three things come to mind. You have your generation, your transmission and your distribution. We can now add a fourth pillar, which is storage.

When we look at the Canadian market—and I'll focus on Ontario, which is my home province—and the dynamics going on, it's very fascinating. I'll give a shout-out to the Independent Electricity System Operator because it has a great website to look at in terms of how power is produced, the supply of it and then the demand. Looking at the IESO website, we see the important role that nuclear, wind, hydro, solar, gas and biofuel play in Ontario, with nuclear obviously being a very significant and stable baseload generator.

On that tangent, George and I have interacted on many occasions. I had the pleasure of visiting the Bruce Power plants last summer in Kincardine and just recently I was out to the OPG refurbishments in Darlington. There's some fascinating stuff going on.

George, the question I have is in terms of the supply chain and looking at the continuum. How is Canada uniquely positioned within the nuclear industry, both at home and globally?

• (1740)

Mr. George Christidis: Thank you for that question.

We have a very strong supply chain. There's the fact that the refurbishment programs—let's just start there—of OPG and Bruce Power are on time and on budget. Some of those projects are actually ahead of schedule, and they went through a pandemic that way, just to stress that.

That is the foundational piece in the Canadian nuclear space that has really lit up the CANDU supply chain. This is a foundational piece for the SMR opportunities, the small modular reactor opportunities, as well. That skilled labour, that capability, that knowledge is foundational, and it has global attention. At some of those international meetings we've attended, other countries want to know how Canada did it. How does OPG do it? How does Bruce Power do it? They want to know explicitly about the refurbishment projects, for example. I think that's the foundational piece: the interest again in CANDU so countries like Romania feel confident things can be delivered.

With this moving forward, I think just the reinforcement of the role of nuclear in a consistent way—whether it's green bond definitions, ITCs that mirror up with the U.S. or the inclusion at COP, for example, of an explicit statement that nuclear is part of the menu of clean energy technologies, a menu that makes sense for different jurisdictions to assemble their technologies—is key.

Mr. Francesco Sorbara: Thank you, George.

We look at the landscape out there. We have leadership from Cameco. We have leadership from Brookfield. There are many Canadian companies in the production of isotopes, for example, for medical uses. That needs to be highlighted.

I do want to get this on the record. I think there was prior mention in some testimony with regard to the ITCs. There are two ITCs that are applicable to the electrical sector. There's a 15% one and there's also a 30% one. Depending on which entity is undertaking the activity, there's an applicable one for 15%, which I believe would be for Crown corporations, and then a 30% one if there are SMRs. For example, Hitachi has made the announcement in Darlington. I believe that would be applicable. I could be corrected, but my understanding is that it would be applicable to that.

I'm not sure how much time I have, but I'll move to Mr. Powell.

Electricity Canada is at 84% in terms of having a clean electrical supply today in Canada, which is very high. I listened to your commentary and your recommendations. I want to go over the blues on that when I have a chance. What is your view in terms of how big a competitive advantage Canada's current electrical supply is in being clean and green?

Mr. Michael Powell: I think it's a big one. That's one of the reasons you see companies locate in Ontario and Quebec. It's not something we can take for granted, though. As the system grows, we have to make sure we keep the system as clean as it is and cleaner, but that it remains reliable and it remains affordable as well. There's a balance to all these things.

The Chair: You have five seconds.

Mr. Francesco Sorbara: I just want to say thank you, gentlemen.

The Chair: Thank you.

Now we'll move to Monsieur Simard for two and a half minutes.

[Translation]

Mr. Mario Simard: Mr. Keefer, I would like to give you the opportunity to answer the question I asked earlier about what you said in your presentation about simplifying the environmental impact assessment process in relation to nuclear safety.

[English]

Dr. Christopher Keefer: Thank you for the question.

I think the major issue at play here, and this touches on the financeability, is the duration of the environmental impact assessments. This is a seven-year process that's being forecasted, and that is far too long given the race to net zero that is on.

In terms of the streamlining that we think should be happening, this is not about cutting corners. There's simply too much duplication within the legislation.

The nuclear builds that are being planned in Ontario in the near term are on existing nuclear sites. These are some of the most intensively environmentally monitored sites in the world. Every five years reports are being submitted to a number of entities, like the Department of Fisheries and Oceans. It's not just the Canadian Nuclear Safety Commission but also Environment and Climate Change Canada and the Ontario Ministry of Environment, Conservation and Parks. There's a lot of active monitoring occurring on site, which should be worked into the agreements. There's more work to do on indigenous consultation. I think that's what the operators are wanting to focus on, by using the existing environmental data they have to again streamline that process so there's not duplication and so that we're not wasting time.

• (1745)

[Translation]

Mr. Mario Simard: Thank you.

I don't have much time left, but I want to talk to you a little bit, Mr. Powell. In your presentation, you said that, by 2050, we will have to triple our electricity production. What sectors do you see as the most promising to get there? Is it wind, solar or hydro? What type of production should be promoted?

[English]

Mr. Michael Powell: It's a little bit of everything—or it's a lot of everything. We've heard a lot of it. It's more hydro, more nuclear, more renewables and more batteries.

I think part of it will come down to innovations with demand management of the distribution system, but we have to get creative and we have to get going. When we think about the financial mechanisms and ITCs, there has to be clarity so that people can get moving on them.

In terms of getting building, we need to make sure that there's a clear and timely approval process that doesn't cut corners but that focuses on the need.

[Translation]

Mr. Mario Simard: Has Electricity Canada done any modelling of the energy sources that could be used? If so, can you provide that information to the committee?

[English]

Mr. Michael Powell: No, we haven't, but our members, such as the IESO, have modelled some of these things out. We can look to see what's publicly available and share them.

Some of that has been mentioned in terms of things like integrated resource plans.

The Chair: Thank you, Mr. Simard.

We'll go to Mr. Angus for two and a half minutes.

Mr. Charlie Angus: Thank you.

One of the big issues, of course, is the grid. That will be a separate study. One thing that really was a disaster for the provincial Liberals in Ontario was the partial privatization agenda that went on and the FIT contracts at the same time. They seemed like a great idea. They gave all kinds of microcontracts to people to put in green power, but then they couldn't get it on the grid. Consumers were stuck paying for it.

Mr. Powell, what do we need to do to get the actual grid capacity up so that we can move these projects online?

Mr. Michael Powell: We've identified a few things. One is literally just making sure that we're able to match the regulatory tools we have with the challenges ahead of us. Some of that is in terms of building. Some of that is in terms of economic regulation, which is at the provincial level.

I just think we have to recognize that the way we used electricity in the past.... It's now going to be different. It used to be that you'd build a nuclear power plant in Pickering, run some wires and it would come to my house in Ottawa. It should be a much more two-way flow. There will be many more opportunities, and we're going to have to find every kilowatt we can through the process.

Mr. Charlie Angus: Mr. Melo, your organization is promoting the use of green hydrogen. I was in Germany last winter, and the Germans wanted to talk to us about hydrogen. They asked, "Can Canada produce hydrogen, yes or no?"

Where are your members in terms of hydrogen production? What do we need in order to get this up and running so that we can actually compete on the world market?

Mr. Fernando Melo: Not to sound like a broken record, but again, we need clarity on these policy tools and clarity on how we move forward. We have a number of members involved in projects on the east coast. We have a number who are involved on the west coast, and some who are even exploring in northern Ontario and northern Manitoba.

Again, we need that clarity on these investment tax rules, and we need that clarity to get building and get going.

Mr. Charlie Angus: Finally, just quickly, how fast do we have to get these tax credits out if we're going to compete?

Mr. Fernando Melo: Yesterday would be great, but I'll settle for sooner rather than later.

Mr. Charlie Angus: Yesterday maybe tomorrow afternoon sometime...?

Could you tell your minister friends about that?

Mrs. Shannon Stubbs: [Inaudible—Editor].

Mr. Charlie Angus: Well, I mean, if the Conservatives could ask you guys to get the price of potatoes down by Monday, we should be able to get the tax credits—don't you think?

The Chair: Time is up. Thank you for the questions, the answers and the colourful commentary.

Mrs. Shannon Stubbs: That's why I have a love-hate relationship with Charlie Angus, though—because that was pretty epic.

The Chair: We'll move for five minutes to Mr. Falk, please.

The floor is yours, sir.

Mr. Ted Falk (Provencher, CPC): Thank you, Mr. Chair.

Thank you to all the witnesses for their presentations. As Ms. Stubbs indicated earlier, it would be nice to have more time.

Mr. Christidis, I'd like to begin with you. You made a comment that we have to decide if there's a climate crisis, and if there is, then nuclear works. That tells me that you're not convinced that we have a climate crisis, but it also begs this question in me: Does nuclear not have a business case?

I'm giving you a chance to clarify that.

• (1750)

Mr. George Christidis: Thank you. No, that is not the intent of my statement at all. The point is that there is a climate crisis, but to some of the skeptics who question the role of nuclear, who also purport that there's a climate crisis, it's to those folks that I'd like to say this: If you're proposing that there's a climate crisis, then all clean technologies need to be on the table.

Governments have come out very clearly on that. It's actually a non-partisan issue in the sense that you have a federal government that supports that view and you have provincial governments, such as Ontario, that support that view.

My point there is to say that to address climate change, nuclear has a role as other clean technologies do, and to address energy security, nuclear has a role.

Mr. Ted Falk: Thank you very much.

Mr. George Christidis: Thank you, though, for that question.

Mr. Ted Falk: Mr. Keefer, there are a lot of points I'd like to follow up on with you.

You talked about the regulatory environment a bit. You also mentioned that, in the fossil fuel industry, the wages are actually quite phenomenal and, in the clean energy sector, that is not the case. We hear about how there are fossil fuel energy workers out of work who need to be transitioned to clean energy for good, union-paying jobs. You say that doesn't exist.

Perhaps you want to expand on that a little—and also on nuclear.

Dr. Christopher Keefer: That is a real challenge.

Again, two-thirds of jobs within Safe Solar, for instance, are low-skilled. People are trained in a course of weeks. That does not command high wages. These are not working environments where people can get together, form a union and negotiate. They're moving from project to project. These aren't tied into communities the way nuclear plants are.

I would say that nuclear offers jobs that are as good or better. We saw that in Ontario with coal. I'm good friends with a former operator at the Nanticoke coal plant who transitioned over to Bruce Power. He loves where he works. I think he's more open to the climate argument now that he's a champion of it.

I want to follow up on the question for Mr. Christidis a bit, in terms of nuclear playing a role in climate.

First, uranium is our number one clean energy export. This hydrogen is a fantasy. It is incredibly inefficient. By the time it gets to Germany, we're talking single-digit efficiency, and we're talking about giving a 40% tax credit. That's billions of dollars for a process that's ridiculous. Frankly, if Germany hadn't shut down its nuclear plants, it would get more than enough electricity compared to that hydrogen alliance. Uranium is our number one clean energy export. It offsets fully one-third of Canada's total all-sector national emissions. Think about that for a second. That is massive.

The second thing is the coal phase-out here in Ontario. We were 25% coal-powered. That was the single greatest greenhouse gas reduction in North American history. Nuclear is absolutely a proven climate tool, if that is your concern.

If your concern is for dignified jobs and a democratic approach.... Fossil fuel workers don't want to work for 36% less pay. They won't accept that. If we want to have a democratic basis for an energy transition, we have to offer jobs that are even better than what they currently have.

Mr. Ted Falk: Thank you for that. That clarifies things.

AECL was located in my riding of Provencher. It has since been moved to a different riding. They're in a decommissioning phase. At one time, it was said, we had the highest per capita rate of Ph.D.s in the country, because those are the types of jobs that are attracted to nuclear.

Can you briefly tell me why we're decommissioning that site, from your perspective?

Dr. Christopher Keefer: Can you clarify which site that is?

Mr. Ted Falk: The Pinawa site in Manitoba.

Dr. Christopher Keefer: I'll defer the question to Mr. Christidis, if you don't mind.

Mr. George Christidis: It was a Government of Canada decision, back in the day, as part of its restructuring process. It wasn't an industry decision. I'd encourage you to get clarification on it. Back in the day, the government of that time was looking at that.

Mr. Ted Falk: Thank you.

Mr. Tertzakian, you talked about the flight risk for capital here in Canada.

Can you also expand a bit more on what you'd like to see from a regulatory environment in order to create more certainty and ensure the capital inflates?

Mr. Peter Tertzakian: From a regulatory standpoint, I agree with the comments that have been made. It takes a long time to get permitting and such. This energy transition is so much about building the infrastructure that goes in between the front-end generation primary sources of energy—like wind and solar—and the back end of people buying, say, electric vehicles. The piping, wiring and stuff in between require much faster permitting and regulatory certainty, if investors are going to bring their capital here.

• (1755)

Mr. Ted Falk: Thank you.

I think my time is up.

The Chair: Thank you, Mr. Falk.

I'll now turn the floor over to Parliamentary Secretary Dabrusin for the final five minutes.

Thank you.

Ms. Julie Dabrusin: Thank you so much.

We've heard a lot today about the need for certainty—being able to have a long-term view on how things are working.

Mr. Powell, I believe that, when you were speaking, you specifically referenced contracts for differences, and the value of contracts for differences in providing that certainty. As I understand it, if you had contracts for differences, the carbon price would be set and people would know the price that would be continuing—or whatever the process would be for it.

Perhaps you could talk to me a bit more about contracts for differences and why you think they are important for the regulatory certainty for clean energy.

Mr. Michael Powell: Yes, if we take a step back, if you think about building, say, a carbon-capture facility on a power plant, that's potentially certainly \$1 billion, maybe \$2 billion. As an asset, it will last many years—20 or 30 years. There is a policy risk for change in some of the financial assumptions that are made with that over the life of the project, and this isn't just a two-year thing or a 10-year thing. It's a long period of time. When our members are looking at making a business decision, the financial organizations that look to lend the money, look to make sure there is some opportunity to make sure that there's a hedge against that. That hedge cuts two ways too, because if set up properly, if the carbon price goes up, the government can make some money on that front.

It's a matter of building in the policy certainty over a long period of time. That is part of how you get to a final investment decision. Again, that's a whole suite of tools. Are there the right financial incentives? Can you get things permitted quickly? Are there clear rules now and into the future that will make sure that your seven-figure, eight-figure, nine-figure investment—whatever the number, the highest range—will get you through to when it's done?

Ms. Julie Dabrusin: If industry is watching and seeing that motions are being brought, or particular parties are vowing specifically to remove carbon pricing, does that create uncertainty for the market when people are looking at investing in clean energies?

Mr. Michael Powell: If we're being honest, there's just a lot of uncertainty, period, right now in terms of where some of the pieces are. There are the financial tools that are still being deployed. We're working through the clean electricity regulation process, and there is uncertainty going forward about what carbon pricing will look like.

Uncertainty, as Peter said, is bad for decision-making. It slows us down in terms of the investments that we have to make to get ourselves to 2050, so I think that's where our focus will be.

Ms. Julie Dabrusin: Perhaps I can just go to Mr. Melo about contracts for differences. From what you see with the renewables industry, would contracts for differences support further investments in your industry?

Mr. Fernando Melo: It all depends on the context. In jurisdictions like Alberta, which do have a credit system and a variety of other things layered and interwoven with their electricity system, it would really provide some certainty. We're less certain in other jurisdictions across Canada, just based on how that would be deployed.

We are working with a number of groups to develop some clearer understanding of how contracts for difference could work for our

industry, but for us the closest and most direct line is the Province of Alberta where they would [*Technical difficulty—Editor*].

Ms. Julie Dabrusin: If you actually do have something that shows us how you would see it working, after you've done all those consultations, had those conversations, it would be great for us to have that.

Mr. Fernando Melo: I'd love to do that.

Ms. Julie Dabrusin: Perhaps I could go to Mr. Keefer, because he spoke quite eloquently about coal and the reliance on coal in some parts of the world, and also about the needs and how nuclear can replace it. I certainly saw that in Ontario, being from Ontario myself. We moved from an average of 55 smog days a year to zero. This is having a really big impact on us, because of nuclear.

Just recently we had a deal with Romania. We signed a memorandum with them. We heard the energy minister from Romania speak about how it was helping them to be away from a reliance on Russia, and it was helping to build out their industry. Can you talk a little bit about the jobs on the international side? When we are reaching those kinds of agreements internationally, what kinds of jobs would that support here in Canada?

● (1800)

Dr. Christopher Keefer: Just on the first element there, in terms of coal to nuclear, there are very few successful examples around the world of a clean energy substitution. Most are coal to gas, with some renewables thrown in on the side.

With regard to the Romanian deal, details are still pending, but 100% of that export finance will be going to Canadian companies, stimulating the Canadian economy, which again provides those incredibly high-quality and skilled jobs. I think this is an excellent investment. It will be the deployment of enhanced CANDU 6s, which are generation III+, a brand new reactor technology. I think that lays the foundation for new builds to occur here in Ontario and across the country where they're needed.

The Chair: Thank you, Mr. Keefer.

I want to thank all the witnesses for joining us today and for their testimony. If you would like to provide a supplemental submission, please send it to the clerk.

We look forward to seeing you again at a future committee meeting.

Now I will suspend as we go in camera for committee business.

[*Proceedings continue in camera*]

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