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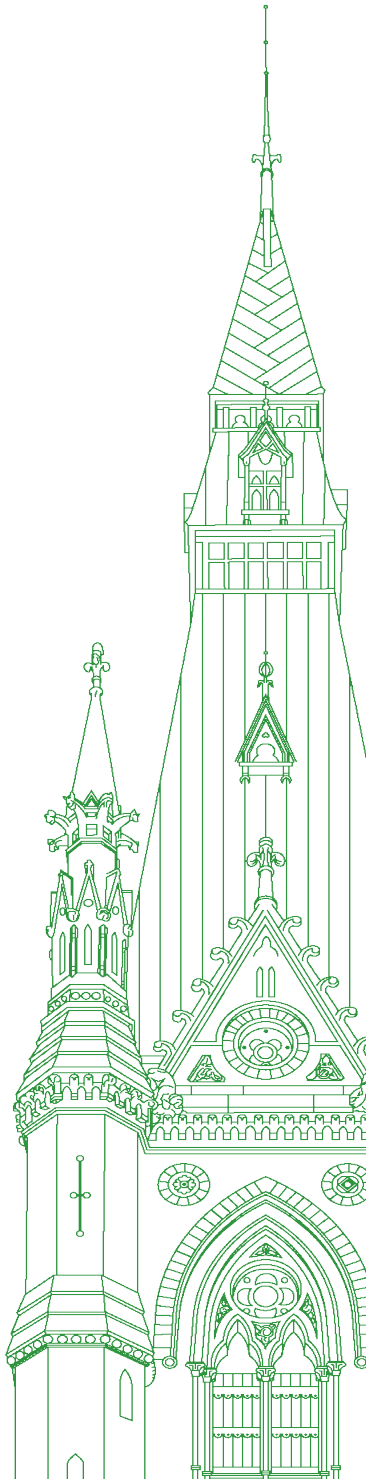

Chair: Mr. George Chahal

Standing Committee on Natural Resources

Wednesday, September 25, 2024

● (1720)

[*English*]

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

Welcome to meeting number 106 of the House of Commons Standing Committee on Natural Resources. Pursuant to Standing Order 108(2) and the motion adopted by the committee on Tuesday, November 29, 2022, the committee is resuming its study of Canada's electricity grid and network.

Today's meeting is taking place in a hybrid format. All witnesses have completed the required connection tests in advance of the meeting.

I would like to remind participants of the following points. Please wait until I recognize you by name before speaking. All comments should be addressed through the chair. Members, please raise your hand if you wish to speak, whether participating in person or via Zoom. The clerk and I will manage the speaking order as best we can. I'll be using two cards, one to give you a warning when you have 30 seconds left, and the other, the red card, when time's up. I will try not to interrupt you mid-sentence.

I'd like to welcome our witnesses who are with us today.

We have, from the Canada West Foundation, Dr. Colleen Collins, vice-president, by video conference; from Clean Energy Canada, Evan Pivnick, program manager, clean energy; from the David Suzuki Foundation, Stephen Thomas, clean energy manager; from Energy for a Secure Future, Shannon Joseph, chair; and from Environmental Defence Canada, Keith Brooks, programs director, by video conference.

You'll have up to five minutes for your opening remarks.

We will begin with Dr. Collins, from the Canada West Foundation.

The floor is yours.

Dr. Colleen Collins (Vice-President, Canada West Foundation): I'd like to thank the committee for inviting me to participate in your study today.

The Canada West Foundation is an independent, non-partisan public policy think tank that specifically focuses on matters that matter most to the west. We advance pragmatic policies based on research and convening. As well, we educate Canadians on these issues.

Your committee is tasked with the study of Canada's electricity system. This is no small undertaking, precisely because there is no Canadian electricity system. Our country has 10 provincial systems, and I'll focus on the west.

My first point is that electricity generation and intraprovincial transmission fall clearly within provincial jurisdiction, so it is quite interesting to participate in a study by a House of Commons committee on this topic.

Western provinces have raised serious concerns that unilateral federal action, through policies such as the Impact Assessment Act and the clean electricity regulations, runs afoul of the Constitution and, in the Impact Assessment Act decision, you'll recall that the Supreme Court pointedly reminded the federal government of provincial responsibility for electricity.

Electricity generation that is reliable, affordable and clean is the objective of every provincial government and system operator. However, because an issue is important across the nation, that does not mean that it is an issue of national concern to be unilaterally addressed by the federal government. Provinces are taking actions to achieve these goals in ways that are consistent with the diverse nature of their resource endowments, geography and system choices, and they are co-operating with their neighbours where it makes sense. In July 2023, the Canada West Foundation released a report that described the diverse electricity landscape across the west. It is available on our website: cwf.ca.

As a committee, I'm sure you will ask, what is the appropriate role for the federal government? Clearly, it is not to create uncertainty that limits investments in both emitting and non-emitting generation through clean electricity regulations that are unnecessary, unattainable, unaffordable and unconstitutional, as Alberta and Saskatchewan have demonstrated, or to create uncertainty through delayed implementation of promised investment tax credits and other uncertainties concerning carbon contracts for differences.

Electricity is a system. Actions on one part have implications for others, and those implications differ in different provinces. Policies that may benefit Canada on average can have very negative consequences in some provinces, as shown by research by the Canada West Foundation and—

The Chair: Ms. Collins, I'll ask you to pause for just a second.

[*Translation*]

Mr. Mario Simard (Jonquière, BQ): We have a problem with the interpretation. I think Ms. Collins's connection is not good enough for the interpreters to do their jobs.

[*English*]

The Chair: Ms. Collins, we'll get back to you in a moment.

I'm going to suspend for a moment, just to check with interpretation to make sure everything is okay. Just hold, and we'll be back in a moment.

We will suspend.

● (1720)

_____(Pause)_____

● (1725)

The Chair: Ms. Collins, before you begin, your connection is a bit unstable. We will try to continue, but if it doesn't stabilize and we can't hear you, we may have to proceed to another speaker. However, we will advise accordingly.

I apologize. Please continue, and hopefully we can get through this without any further disruptions.

Dr. Colleen Collins: The Supreme Court determined that where federal and provincial responsibilities overlap, each order of government should stay in its own lane, related to its heads of power, and they should work together through co-operative federalism to achieve their goals. This doesn't only make constitutional sense. It also makes practical sense, especially for complex systems like electricity under very diverse conditions.

Regulations and funding programs that don't consider the realities on the ground will be counterproductive. There's much to be gained through true co-operation, but to be sure, consultation is not the same thing.

Second, if we consider interprovincial interties as an example of an area within federal jurisdiction, a map of electricity generation and emissions across the west suggests an obvious idea: Ship zero-emission hydroelectricity from the bookends of B.C. and Manitoba to Alberta and Saskatchewan. However, as your committee studies the system in more depth, you will find that B.C. and Manitoba simply don't have spare ongoing baseload electricity to send to Alberta and Saskatchewan.

In 2023, B.C. actually imported more electricity from the U.S. and Alberta than it exported. Even with Site C coming online at the end of the year, B.C. will soon face supply shortages. Manitoba is also facing somewhat similar situations due to the drought, and it, too, has issued a call for major new renewable generation. You will also discover that Alberta provided 92% of Canada's new renewable storage capacity in 2023. Since Alberta doesn't have its own major hydroelectricity resources or consistent supply from B.C., wind and solar have developed precisely because the resources exist and because there is natural gas to provide baseload power.

The Chair: Ms. Collins, we are at time, so if you have a concluding sentence or two, I'd just ask you to wrap up, please.

Dr. Colleen Collins: As western provinces seek opportunities to increase reliability, affordability and sustainability, there is a role for the federal government to use its spending power in co-operation with the provinces to support emissions reductions that suit their individual conditions.

Thank you.

The Chair: Thank you.

We'll now go to Keith Brooks from Environmental Defence Canada.

You have five minutes.

Mr. Keith Brooks (Programs Director, Environmental Defence Canada): Thank you, Chair and members of the committee.

I am Keith Brooks from Environmental Defence.

It's our view that it's absolutely essential to fully decarbonize Canada's electricity grid by 2035. A clean grid is the backbone of the energy transition. The pathway to a net-zero economy, simply put, is achieved by electrifying as many energy end uses as possible, fully decarbonizing the electricity grid, achieving all available conservation and efficiency, and then, finally, dealing with those hardest-to-abate sectors.

Electric vehicle adoption, cold climate heat pumps and electric arc furnaces are examples of the electrification of end uses, but these solutions only realize their full potential if we have a fully decarbonized grid.

A 100% clean and renewable grid is entirely achievable, especially in a country like Canada. Many countries have already accomplished this. Many more, including all of Canada's G7 allies, have committed to it, and few countries are in a better position than Canada to achieve it. We have abundant wind, water and solar resources. Canada's grid is already 84% non-emitting, and the federal government has a clear role to play in getting our nation the rest of the way there.

As usual, this can be accomplished through a targeted use of both carrots and sticks: that is, federal support for a more resilient and interconnected electricity grid, and robust federal clean electricity regulations to deliver on the Prime Minister's commitment to get Canada to a net-zero grid by 2035.

The good news is that renewable energy is the cheapest source of new electricity generation in the world. Wind power is the cheapest source of new electricity generation in much, if not all, of Canada today. Wind power projects have out-competed, and will continue to out-compete, new gas plants and nuclear power projects, hands-down.

Solar power prices have been dropping and are expected to continue to drop, dramatically, and solar is expected to be the cheapest source of new power in Canada within the next decade.

We already have well-developed hydro power resources across the country, and companies are looking to augment those by tapping tidal power and wave power to add to what is already a robust amount of renewable baseload.

The knock on renewables, of course—wind and solar in particular—is that they're intermittent. The sun doesn't always shine, and the wind doesn't always blow. Though this is true, energy storage technologies are evolving quickly alongside renewable energy and are firming up these intermittent resources at costs that are very reasonable.

For example, the province of Ontario recently completed the procurement of what they call “capacity resources”. These are resources that are not baseload, not expected to be generating all the time, but are there to add capacity when needed. The province opened up procurement to gas plants as well as battery energy storage systems, and the battery systems came in at 40% of the cost of the gas plant on a per megawatt basis. Yes, the gas plants can run a bit longer, but even if you doubled the capacity of the battery systems, they would still be cheaper than gas. Hydro power can also act to firm up wind and solar. Hydro plant operators can generate more or less electricity based on demand and based on what other renewable sources are contributing.

The federal government does have a role to play in adding further resiliency and reliability to the grid by taking action to ensure that provincial and territorial grids are connected into a national network.

This recommendation has been made by the Canadian Climate Institute, by the Canada electricity advisory council and, as noted, by bodies like the International Energy Agency, which recommended that the Government of Canada “work with the provinces and the electricity industry to facilitate greater east-west interconnectivity between Canada's electricity networks and greater integration of Canada's electricity markets more generally.” I would add that we would also want to see more integration with Canada's territories and the territorial grids.

The two main mechanisms to achieve this are for the federal government to use its convening power, and to fund projects that facilitate interconnection and that get the provinces to see themselves as part of a national grid and network. This need is clear, and the federal role has been clearly identified. We recommend the government get moving on this without further delay. I'll note that progress in Atlantic Canada on the maritime link suggests that the federal government has already taken this advice on board and is moving forward to implement it.

More is still needed, and perhaps especially to help prairie provinces that are presently overly reliant on fossil fuel generation. Alberta and Saskatchewan have some of the best wind and solar resources in Canada, but they would benefit from greater connectivity to other provinces and territories that have robust hydro power resources.

The other key piece of the puzzle, as noted above, is that with the guarantee of greater interprovincial and territorial connectivity and resilience, the government should bring forward strong clean electricity regulations. Countries around the world are building renewable power at an incredible pace, but here in Canada we're moving comparatively slowly due to the regulatory uncertainty at the federal level. We're still waiting for the final federal regulations, and in the meantime some provinces are going backwards by introducing policies that make building new renewable energy very challenging.

Thank you very much.

● (1730)

The Chair: Thank you.

We'll now go to Evan Pivnick from Clean Energy Canada.

You have five minutes.

Mr. Evan Pivnick (Program Manager, Clean Energy, Clean Energy Canada): Good evening, Chair and members of the committee.

My name is Evan Pivnick. I am the clean energy program manager for Clean Energy Canada, a climate and energy think tank run out of Simon Fraser University.

I'm here to talk about Canada's clean electricity opportunities and the pivotal role this plays in enhancing our competitiveness, protecting affordability and ensuring the energy security of Canadians. The choices we make today about how we grow, modernize and decarbonize our electricity grid will profoundly impact our economic prosperity for decades to come.

Globally, the world is electrifying. Of the $3 trillion U.S. in expected global energy investment this year, $2 trillion will flow into clean energy technologies and infrastructure. The IEA expects that by 2050, in a net-zero scenario, electricity will be meeting more than half of the world's energy needs. It's not just electricity in general, but clean electricity specifically that countries are seeing as a strategic imperative. From hydro to nuclear and renewables backed by energy efficiency and energy storage, non-emitting technologies are increasingly the priority.

Across the world, fossil fuel demand for electricity has peaked in 95% of OECD countries and is now in decline. The share of electricity demand being met by renewables has been growing exponentially, expanding from roughly 20% in 2015 to an expected 38% by 2027. Even under existing policy, 80% of new power generation added globally by 2030 is expected to come from renewables.

While global climate policies certainly play a role in driving electrification, that's far from the only factor. The falling prices of key clean energy technologies, increasing demands for electricity from households and industry, and the rising importance of energy security in the face of global conflicts are all significant drivers.

Here at home, clean electricity presents opportunities for Canada that we should be moving quickly to embrace.

First, clean electricity offers Canada a major competitive advantage in a global economy that's increasingly preferring low-carbon goods and services. As ally countries like the EU and the U.S. consider moving forward with carbon border adjustments to keep out higher-carbon goods, and exports of clean energy rise in importance, our ability to power our economy with clean electricity will become an imperative. Choosing to delay the deployment of clean electricity is choosing to allow investment that could come to Canada to go elsewhere.

Second, clean electricity and the clean energy solutions that plug into it can improve household affordability. A recent report by Clean Energy Canada looked at Alberta and Ontario and found that, as of 2023, wind power was already able to produce electricity at lower cost than natural gas. Another study of ours, due out in the next few weeks, will show that deploying just a few clean energy solutions like EVs and heat pumps, powered by electricity, can help families across the country save hundreds of dollars a month on their energy bills. At a time when cost of living concerns dominate the national conversation, clean electricity can be an important part of that solution.

Finally, building out domestically produced clean electricity and electrifying our economy will enhance Canada's energy security. Global actions have an impact on the prices we pay here at home. Just last week, we saw global oil prices fall to a three-year low, in large part due to the surging EV adoption we're seeing in China. Enabling Canadian households and industries to plug into homegrown Canadian clean electricity enables them to benefit from predictable electricity prices that are regulated provincially, as opposed to being exposed to geopolitically driven fossil fuel price swings.

Canada has a significant head start, with a grid that is already more than 80% clean, but as laid out in the final report of the independent clean electricity advisory council, the twin challenges Canada must overcome are to decarbonize our electricity grid while simultaneously expanding it to meet the growing demand for electricity that we face.

There are many reasons for optimism that we can conquer these challenges. Over the last three years, nearly every province in the country has identified clean electricity as a key competitive advantage and has begun to take steps to decarbonize and grow their respective electricity grids. The problem isn't the direction; it's the speed at which we're moving. Here the federal government has a vital role to play in urgently capitalizing on our country's clean electricity opportunity.

Specifically, Clean Energy Canada recommends that the federal government drive ambition through setting clear targets and developing flexible regulations that address carbon pollution and help natural gas to be a resource of last resort; provide funding at the scale required to decarbonize our existing system and deploy new clean electricity resources needed to meet growing demand; and support the uptake of household clean energy technologies like EVs and heat pumps that help unlock cost savings and enhance our energy security.

The competitiveness of our economy, the affordability of electricity and the security of our energy supply depend on the federal government being an active partner. As others have said, the direction of change is inevitable, but the speed is up to us.

Thank you so much. I look forward to your questions.

● (1735)

The Chair: Thank you.

I want to remind the witnesses that yellow is a 30-second warning and red is time's up. I just want to make sure that you don't stop early.

We'll go to Mr. Stephen Thomas from the David Suzuki Foundation.

You have five minutes. Go ahead.

Mr. Stephen Thomas (Clean Energy Manager, David Suzuki Foundation): Thank you.

First, I'd like to acknowledge the unceded Algonquin Anishinabe territory on which this conversation is taking place.

Of course, I would like to thank the chair, the vice-chairs and the members of the committee for their time on this important topic today.

My name is Stephen Thomas. I am the clean energy manager for the David Suzuki Foundation. The foundation has been a part of convening, active in research, and working on the issues of electricity and renewables for more than 30 years. We welcome the opportunity to contribute some of our more recent research and views to this committee's work on electricity.

Today we see an exciting opportunity before us in the shared work of upgrading Canada's electricity system to meet this moment in order to prepare for a competitive, secure energy future and to ensure affordable, reliable and clean electricity for Canadian households along the way. This moment requires that Canada be thoughtful and strategic in its approach to the electricity system, which is why we commend the work of this committee in exploring pathways, technologies, frameworks and approaches.

The challenge of meeting growing electricity demand and the changing nature of electricity production and consumption is considerable, and it's why we need a plan. However, the benefits are also considerable when it comes to the affordability of energy for everyone, better health outcomes for ourselves and our kids, economic competitiveness and security, opportunities for indigenous self-determination and energy sovereignty, and jobs and benefits for workers. Clean electricity has a lot to offer. However, along the way, we must ask important questions, such as who benefits and how we can maximize those benefits for families, communities and the indigenous nations on whose land this electricity transformation takes place.

We recognize and lift up that we are having this conversation as multiple crises are affecting Canadians, including the crisis of affordability and the climate crisis itself. The International Energy Agency, as already mentioned, has made it quite clear for years that if the world is to be on a path that avoids the worst impacts of climate change, this sort of work on decarbonizing electricity is what's needed for a developed country like Canada—in particular, the 2035 target for net-zero electricity. This is why Canada's allies—the United States, the United Kingdom, Japan, Italy, Austria, Belgium, France, Germany, Luxembourg, the Netherlands, Switzerland and more—have all committed to decarbonizing their electricity systems by 2035 or sooner.

This is also why we were pleased to see the federal government commit to the clean electricity regulations and to its G7 commitments on electricity. This target is feasible here in Canada, and we look forward to the real work of collaborating on pathways to achieve these goals. Canada has done important work like this before. Throughout 2016, 2017 and 2018, it developed and finalized federal regulations for the electricity sector to phase out coal-fired electricity by the year 2030. There were many tough conversations then, as there are now. Ultimately, workers, utilities, system operators, provinces and other stakeholders came together to deliver these pathways for affordable, reliable electricity without burning coal. Alberta is already meeting this target seven years early, and Nova Scotia is accelerating its pathway to phasing out coal, primarily as a cost-saving measure while the cost of fossil fuels spikes. Regulations and policy clarity were important then, as they are now.

I have a number of recommendations that we've provided to the committee in our brief. To summarize them in terms of topic, we feel this policy clarity with something like clean electricity regulations is important, as is the federal government's role and convening power when it comes to pulling together provinces, regulators, utilities and other stakeholders, increasing electricity system planning and collaboration, and finding aligned priorities and strategies for cross-jurisdiction transmission infrastructure. A plan for this convening should be considered in both this study and Natural Resources Canada's upcoming electricity strategy for Canada. In our recommendations, we also lift up the importance of this interprovincial transmission piece. There is a key role for the federal government to convene, help plan and fund.

Many of the remarks I'm making here to you all today have drawn on some of our more recent research and reports. Those, too, have been submitted. I'm happy to speak about those in detail here.

Thanks, again, for your time.

● (1740)

That's all.

The Chair: Thank you.

We'll now go to Shannon Joseph from Energy for a Secure Future.

You have five minutes. The floor is yours.

[*Translation*]

Ms. Shannon Joseph (Chair, Energy For A Secure Future): Members of the committee, thank you for the opportunity to speak with you today.

Energy for a Secure Future is a civil society initiative with two objectives.

First, it seeks to advance a national conversation about Canada's role in the energy security of our allies around the world.

Second, it aims to learn from experience and research on energy system transformation in order to propose a path for Canada to reduce its emissions and preserve prosperity.

[*English*]

In our 2024 report, “Getting Canada’s Energy Future Right: A Consumer Lens on Energy in Canada”, author Michael Cleland examined stationary end use energy in Canada between 2005 and 2022. He also looked at the Canada Energy Regulator's 2023 net-zero scenario and implications for Canada's electricity system and end use energy nationally. I'd like to highlight a few considerations.

First, it is important to have a framework for evaluating the merits of different energy policies and to guide decision-making. Our report suggests the following framework. It has to deliver on energy fundamentals: affordability, reliability, safety, security and resilience. It must have social acceptability—this is a country where Ontario gets 60% of its electricity from nuclear power, whereas in another province, British Columbia, nuclear power generation was banned by legislation in 2010. Finally, the system has to deliver on our environmental goals.

Solving these three together is a challenge, but I would suggest that the shaky support for many climate policies in the country reflects the fact that many of the policies were developed without adequate attention to energy fundamentals, which always reassert themselves.

A second consideration needs to be on the current energy mix in Canada. Today, electricity provides 22% of stationary end use energy. If you include transportation, then it's less than 20%. We're talking about replacing 70% to 80% of the energy currently used in Canada with the CER's combination of new electricity, new fuels and the elimination of about 15% of demand. This is not a fast or low-cost proposition, especially in a country that has taken over 10 years to build a one-gigawatt Site C dam.

A final consideration is how energy is used and the possibilities for substitution.

In Canada, 67% of end use energy is industrial. This includes manufacturing, agriculture, mining, etc. In some provinces, like Alberta, industrial energy use represents 80% of stationary energy end use. Industry's use of energy is what creates jobs, drives our international trade and underpins our quality of life.

Today, the majority of this industrial energy is not electricity—it is refined petroleum products and natural gas. These energy choices are driven by the nature of the industrial activity. Even in the CER's net-zero scenario, natural gas and refined petroleum products still make up a larger share of industrial energy use than electricity. It is worth noting that the increased electricity use and the use of emerging fuels envisioned in that scenario is energy that currently does not exist.

When one examines what the CER proposes for changes to all end use energy in Canada, combined with our other national goals of population growth, re-shoring of manufacturing and becoming a player in AI, then we are talking about the doubling or tripling of our current electricity system and related infrastructure. While this may be theoretically possible to do in 25 years—assuming we overcome issues around availability of skilled labour, material supply chains and regulatory approvals on the required scale—"Who pays?" remains the big question. Both households and businesses will have a limit to their ability to pay. We don't have a lot of good answers on this.

We have a couple of recommendations. Number one, solve for the trilemma. As political decision-makers, you need to answer to the public for energy fundamentals, the acceptability issues and the environment. Number two, start by producing more electricity. We don't have enough electricity today. In 2023, as was mentioned, B.C. was about two Site C dams short. In Quebec, in winter, Hydro-Québec reported that they are about three Site C dams short.

Before we ban natural gas home heating or the internal combustion engine, let's make more power available, see what it takes to do that, see how those costs are absorbed and then keep going.

● (1745)

Finally, the issue is emissions, so let's focus on emissions. We have a lot of gas infrastructure in Canada, and we have pore space for carbon capture. Leveraging existing assets will bend the cost curve and buy us time to build those new systems while preserving energy security and affordability.

Thank you so much.

The Chair: Thank you.

We'll now proceed to our first round of questions. We'll start with Mr. Dreeshen for six minutes.

Mr. Dreeshen, the floor is yours.

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

Thank you to all of the witnesses.

First, I'd like to talk to Ms. Collins, with the Canada West Foundation.

There was a discussion, as you indicated, on resource determination and the diverse electricity landscape. These are provincial regulations and provincial resources. Of course, we have the issue of the federal government encroaching in that area. You talked about some of the things that happened as far as the Supreme Court is concerned. I wonder if you could start with that, and then I'll have some other questions.

Dr. Colleen Collins: Certainly. Thank you.

The Chair: Ms. Collins, can you turn your camera on, please, for interpretation?

Thank you.

Dr. Colleen Collins: Thank you for the question.

My point is that you have to start from the point of the constitutional positions on the role of electricity in this country being provincial jurisdiction. Unless we're prepared to change the Constitution here—and I think we might have other areas where we might start—we start there.

The second thing is—

● (1750)

The Chair: Ms. Collins, I'm sorry. We're having challenges with your connection. The interpreters are having a hard time being able to interpret with the breakup.

Mr. Earl Dreeshen: I'll move on.

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

What we will do, Ms. Collins, is have you provide a brief to the committee on anything you may have missed today so that we can continue with the meeting.

I'll go back to Mr. Dreeshen. The floor is yours.

Mr. Earl Dreeshen: Thank you.

I'll direct this question to Ms. Joseph.

We made the transition from coal to gas, and there was a lot of effort to make sure that happened, but then the government and other groups started moving the goalposts, so now we have to get rid of gas. We have to go back to these other areas.

You talked about the need for four more Site C dams if we wish to come anywhere close. I don't imagine building dams in Canada is any easier to get through for folks than building more gas plants. I think that's one of the problems.

Of course, if you also look at the doubling and tripling of the infrastructure that is required.... We're talking right now about how you can transfer it across provinces and how you can get the energy from one spot to the other, but then you are also talking about how you're going to get it into communities and into homes. We've heard people talk about the doubling or tripling of the costs that will be required to make that happen. The big question becomes who pays.

Right now, we're demonizing big oil. Eventually, it will be big wind and it will be big sun. There will be billions of dollars being made in that industry, so they are going to be the ones paying. They're also going to be the ones filling their pockets with a lot of money from this.

I wonder if you could talk about how we can transition through this in a logical fashion so that we can assist in getting electrification to where it needs to be, but stop this demonizing of what we have and the idea that the only way you'll ever get things to happen is if you cut out oil and gas.

Ms. Shannon Joseph: Thank you.

I would echo the comments made by Ms. Collins about really trying to respect the provinces and letting them lead the approach to transforming electricity systems. They have the strongest sense of where they're starting from and what some of the local lessons learned have been.

When I hear, “We have to electrify everything as soon as possible”, there's a real risk of asymmetry between the load going up and the supply not being available to meet it. I'll give the example of Hydro-Québec. It's announced plans to spend between $152 billion and $185 billion to enhance its electricity system. Somebody has to pay for that. Multiply that across the country and it's very significant.

Again, for the current needs we have and the current end use we have, we don't have enough electricity. We need to start building more, absorbing those costs and taking further steps.

Mr. Earl Dreeshen: One of the other things you've also spoken of is the stationary end use that is required. This is where you generally have an industry that is compact, and then it's easy to move that energy around.

One of the options, of course, is small modular reactors. There again, you're going to find the same group of people who don't like anything else and who are also going to be against that, so that again becomes one of the issues. We need to have industry; that's the thing that is going to pay for all of these things. There has to be a balance.

How do you think governments can look at that balance? Somewhere along the line, you have to simply say to those who don't want to see any development other than.... I'm curious as to how they think it's going to work. How is that going to come to fruition?

Ms. Shannon Joseph: The CER estimates that we need to get from 152 gigawatts of capacity to 350 gigawatts. This is massive.

Again, if we are not able to manage how those costs pour out to either the ratepayer or the taxpayer, we're going to have serious competitiveness issues, because those things have to be paid for, assuming we have the labour, etc. Sequencing these things and having them locally driven, and allowing the provinces to work with industry and with communities, mayors and municipalities on how to pace things, I think is going to be vitally important.

● (1755)

The Chair: Thank you.

We'll now proceed to Mr. Jowhari for six minutes.

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

I'd like to welcome all our witnesses, both online and in person here.

Thank you for focusing on this.

I'm going to start my line of questioning with Clean Energy Canada.

I want to point to a report that came out in February 2023 entitled “A Renewables Powerhouse”. It says, “New research finds that wind and solar power with battery storage is set to produce cheaper electricity than natural gas in Alberta and Ontario”.

In your opening remarks, Mr. Pivnick, I think you briefly touched on the potential. Currently, it's cheaper, but it's going to go down further. Can you quickly touch on that before I go to some recommendations that I'm trying to get clarification on?

Mr. Evan Pivnick: Absolutely. I think this report came about because when we look around the world, wind and solar are by far the cheapest way that you can generate electricity today. Our premise was, how can we maximize that role? That starts with understanding what those costs are here in Canada. Right now, we're heavily reliant on studies out of the U.S. to tell us what the capital costs are and what the operating costs are.

In this study, looking at Ontario and Alberta, where we have seen significant renewable development, we went in and said, let's go talk to companies, look at the research and build Canadian-based cost estimates for what this costs us, so we can have an informed conversation about how we can get renewables to play as much of a role as they will be.

Most studies point, in a net-zero Canada, to 30% to 40% that could be coming from renewables. How do we ensure we're able to achieve this? How do we ensure we can maximize the role of the cheapest way we can generate electricity, especially, as others have pointed out, as we have a very significant build-out to occur in a short period of time?

Mr. Majid Jowhari: With 30% to 40% coming from renewables—and the leading renewables naturally are solar and wind—what is the pricing? How do you see that price as compared to that of gas, let's say?

Mr. Evan Pivnick: In every single jurisdiction, you're going to have slightly different prices. Right now, you're looking at wind and solar being able to come in at somewhere between 5¢ and 10¢ per kilowatt hour. When you look at natural gas, again, it's probably up into.... Certainly, natural gas at times can be around the same price or upwards, above 10¢ into 15¢.

When we look at the full picture, though, we're talking about needing a full suite of options available to us. Renewables are where we need to start. We need to think about how we can maximize the cheapest available, and then look at how we address the other pieces, because reliability and security.... This is the only way this build-out is going to work.

Mr. Majid Jowhari: The way I understood it, Ms. Joseph talked about how we need to look at gas as a bridge until we figure out many other things, including skills and having the right skill set, having the right investment and having the right model for being able to finance all of this. What are your thoughts on that?

Ms. Joseph, do you want to answer that?

Ms. Shannon Joseph: Reports have come out on this. Basically, infrastructure you don't have to build is free. We have a lot of infrastructure that can be leveraged, such as gas infrastructure into which you could blend hydrogen and other things. At least you have something delivering while you're building up lots of additional capacity needed on the electricity side. If you can use this while you do something else, it lowers the cost, because you didn't have to build something else. That's what I mean.

Mr. Majid Jowhari: To me, that's a bridging.

Ms. Shannon Joseph: Sure.

Mr. Majid Jowhari: There's an aspect to this that at some point, once you build that capacity, it needs decommissioning. Then you're left with a certain asset.

What are your thoughts on that?

Ms. Shannon Joseph: As long as you can deliver on your energy fundamentals.... Those systems will be decommissioned when the new system can deliver what it's supposed to.

There's a long road there. As I said, the CER says it's a 130% increase in our electricity. We're just starting.

Mr. Majid Jowhari: You're suggesting the timing would be such that, when we start to commission, we are sunsetting some of the others.

Ms. Shannon Joseph: The sequencing of that will be determined by the utilities, which are responsible for safety.

● (1800)

Mr. Majid Jowhari: I'll go back to Clean Energy Canada.

I believe you had four recommendations in your report. I'd like to focus on the second recommendation, which specifically talks about sending the right signal and creating policy certainty. I want to touch on policy certainty and get your point of view. I think Dr. Collins also touched on the need for policy certainty. Can you share what you mean by “policy certainty” and what we can do, specifically, as a recommendation? Think about this: At the end of this study, we're going to put forward recommendations, and one of those recommendations has to be policy certainty. What would that look like?

Mr. Evan Pivnick: Certainty, especially with the scale of investment we're talking about, is absolutely essential. That's everything from the investment and fiscal instruments the federal government uses to the regulations it sends. We need clear, proactive publication of those when it comes to ITCs, making sure the rules are clear so everyone knows exactly what's required in order to make sure capital can move. When it comes to pollution regulations, make sure the details are clear, well developed and flexible to meet jurisdictions. More than anything else, be clear about where we're going.

The clearest one, from a signal perspective, is what we see from provinces. Almost every province in the country has set net zero as a clear target. That provides an anchor for where we need to go. That certainty is essential.

Mr. Majid Jowhari: Thank you.

The Chair: Thank you.

We'll now go to Mr. Simard for six minutes.

[*Translation*]

Mr. Mario Simard: Thank you.

I think Ms. Collins has left—I don't see her anymore—but I would like to comment on something she said.

She said that there is currently no Canada-wide electricity grid and that, in any case, it is a provincial responsibility.

I completely agree with her. That said, if that responsibility applies to electrical grids, then presumably it also applies to pipeline networks. For example, a province can decide not to run pipelines through its territory. You may have heard that the Conservatives are trying to reach an agreement to build a pipeline extending to Quebec. If a pipeline can be rejected, I think the same logic applies.

Could we have a quick comment from Ms. Collins on that?

[*English*]

The Chair: Mr. Simard, we've had some technical difficulties with Ms. Collins.

[*Translation*]

Mr. Mario Simard: She can get back to us in writing.

[*English*]

The Chair: Ms. Collins, can you note any questions you get? Then you can provide a written response to the committee on that specific question.

Thank you.

[*Translation*]

Mr. Mario Simard: Thank you.

Ms. Joseph, I missed something.

I think you talked about the challenges in Quebec during peak periods. I don't know if you know this, but these periods are equivalent to less than seven days a year. On those seven days, we have to scramble to find solutions.

However, the reason why the Quebec government has gone from an energy surplus to an energy deficit—aside from its sales agreements with the United States—is mainly because most large companies are looking to come to Quebec to benefit from clean energy.

I am telling you this because, in my opinion, it is a clear sign that the industrialization underway is based on clean energy. If an economy like Canada's doesn't make that shift, it won't be attractive to large companies. I'm talking about companies in the battery sector and the aluminum sector.

The fact that Quebec aluminum smelters can rely on clean energy sources makes them the envy of the entire world.

Today, there is so much demand for Quebec's energy blocks that we have to make agonizing choices to allocate them. To me, that's pretty clear proof that in the western industrial world there is a demand for clean energy sources rather than oil and gas.

Do you agree with my thinking?

Ms. Shannon Joseph: Yes.

My comment is this: If the Quebec government runs out of power and has to reject applications from companies that are short of energy for projects requiring 21,000 megawatts, according to a report I have seen, we have to wonder how we are going to create the energy that provinces across Canada need, how much it will cost and how it will be delivered to businesses.

● (1805)

Mr. Mario Simard: Okay.

Our reasoning is similar, but as a report will be coming out on this, I just want to bring to your attention that the majority of western countries are looking to reduce their carbon footprint. If Canada does not build on a strategy to wean itself off gas and oil, it is safe to say that, within 20 years or so, our industry, and even our small and medium-sized businesses, will no longer be competitive.

Do you agree with that?

Ms. Shannon Joseph: No, I don't agree with that.

Let us look at what is happening in the western world. Germany has seen a major increase in its renewable energy production. However, it has also seen a decrease in its industrial productivity two years in a row, because its industries have moved to the United States. They don't have the same power grid—

Mr. Mario Simard: I don't agree with you. Companies are leaving because the majority of them are looking for places where they can find clean energy for industrial manufacturing. We are seeing American companies, such as BASF, offshoring to Canada because they want their heavy industrial processes to be run on clean energy.

Germany's major problem is that it is not able to provide clean energy in the short term.

Having gone on a mission with the Minister of Energy and Natural Resources and met a lot of people, I can assure you that many companies are looking for clean energy for their major energy projects and are willing to offshore their production to do so. That's the root of the problem.

If Canada focuses its industry solely on oil and gas, we will soon find ourselves in the same position. Large companies will prefer to do business with countries that have gone through the energy transition and that are able to produce goods and services with a low carbon footprint.

Do you agree with what I just said?

Ms. Shannon Joseph: Personally, I think that, as a lot of data shows, many countries have lost industrial investment to the United States because it provides incentives. It's true that companies want to do well environmentally by making good energy choices, but they also want to make money.

For reasons it would be interesting to know, some companies have chosen the United States. We have to pay attention to that when we make investments in Canada. What is being done to ensure that we are competitive?

Mr. Mario Simard: Why are these companies asking for energy blocks from Quebec and not asking to set up in Alberta, where low-cost energy would be abundant and available?

Why are these companies not making that choice? Is it because they feel that using a carbon-intensive energy source is going to harm them?

Ms. Shannon Joseph: I agree with you, they want to do that, but they also want to make money, so they don't base their choice solely on that.

Mr. Mario Simard: Okay. Thank you.

[*English*]

The Chair: Thank you.

We'll now proceed to Mr. Angus for six minutes.

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

Last month, one of the largest lobby groups for the electricity industry, Electricity Canada, started running advertising and was warning about catastrophic conditions if we fix up our electricity regulations and push to get to cleaner energy. It was predicting brownouts and disasters, and God, my friend Earl is talking about the dangers of big sun.

Mr. Thomas, you accused them of a misinformation campaign. That's pretty bold language. You said:

> It's disappointing to see an industry association like Electricity Canada employ such misleading rhetoric because some of its fossil fuel–powered members are delaying the transition to clean energy.

What do you mean by that?

Mr. Stephen Thomas: It is. It's disappointing to see an industry association show up in that way in a conversation about where things are headed in Canada on our electricity future. It's more confusing for me, because Electricity Canada, as an entity, has so many members that are already entirely clean electricity providers or have committed themselves to produce clean electricity by 2035 or another date. If I were those members of that association, I would be embarrassed.

When it comes to the kind of misinformation or inflammatory language we see in its ad campaign, it's more along that language of blackouts, brownouts and cost. We just don't know what numbers it's using to make those claims.

When it comes to the clean electricity regulations and the research we've been a part of, we see that as we move to a cleaner electricity system, we move to a cheaper electricity system. The cost of energy on the whole for households goes down as we electrify and as we move to clean electricity too.

● (1810)

Mr. Charlie Angus: Thank you.

One of the things that really shocked me.... Ontario used to be a hydro superpower. Of course, Kathleen Wynne helped to sell it off and Doug Ford nailed it into the ground. Ontario is now complaining that if we bring in clean electricity regulations, it'll be a catastrophe for it, and it needs until 2050 to meet this. That seems to be staggeringly lazy, given what I'm seeing all over the world. We've seen a huge revolution in clean tech in Texas and California and all over Europe, yet Ontario is saying, "Don't give us any rules that make us actually improve."

Why is it that we have such dismal standards? Do you think it's realistic to say to an energy superpower like Ontario, "Don't bother cleaning up until 2050"?

Mr. Stephen Thomas: At the David Suzuki Foundation, our research tells us and informs our view that moving to clean electricity is good for the places that do that work. That's true for Ontario. That's true everywhere in Canada.

It's true that different provinces have different levels of work to do. We have different starting points, and I think that, too, is where the federal government can help the provinces on their varying pathways to this clean electricity target and this clean electricity future.

It was great and encouraging for us to see the federal government and the Government of Nova Scotia reach a common understanding on the clean electricity regulations. That, too, is a province that depends an awful lot on coal and sees the value in cleaning up its electricity system. In Ontario and elsewhere, we see the value.

Mr. Charlie Angus: Thank you.

We could do better. Certainly, if the Liberal government ever got its investment tax credits out of whatever department they're hiding in, we would see a huge revolution. We haven't seen anything yet.

Mr. Pivnick, I want to ask you a question. You don't often get to see an economic revolution happening in front of your face, but within the last year, we've seen staggering increases in EV battery storage capacity and solar capacity. We've seen countries go from zero to 100 in staggering times. Again, jurisdictions like California are now going many days just on clean energy. In Texas, where they have fewer people who believe in climate change than in the Conservative caucus, they are doing that.

How do you see the potential for Canada? Are we going to sit on the sidelines while the rest of the world and Europe move ahead? What is the potential here in Canada?

Mr. Evan Pivnick: I think that's entirely up to the choices that governments, both provincial and certainly federal, make around the level of ambition we put on this. We keep talking about costs with net zero. There's no question that doubling our grid in 25 years to achieve net zero has a cost associated with it. However, it also should be viewed as an opportunity for Canada to choose to be competitive in a world that's trying to achieve net zero.

When you look across the world, you will see nearly 150 countries, covering 90% of global CO2 emissions, that have lined up and just achieved that target as well. They're accelerating, so the choice for Canada is this: Do we want to be part of that? Do we want to try to secure the investments from that? We've seen some of those coming and landing with some of the choices that we've made in the battery supply chain. There are incredible opportunities right across the country. Alberta has to have one of the best opportunities of all jurisdictions to be a player in this.

Mr. Charlie Angus: I mean, we were born on third base when it comes to energy potential, and now we're saying, “Oh, it's going to be too hard to get to 2050. Oh, my God, give us a break”, while the rest of the world, which doesn't have nearly what we have, is going there. What does that say? I mean, we started out with an 85% clean grid. Getting that other 15% shouldn't be that difficult. Can we do it?

Mr. Evan Pivnick: I absolutely think we can. The Canada electricity advisory council made it clear that we have to tackle two challenges at the same time. The first is the decarbonization of the remaining 15%, as you said. The second is to double, and the choices we make in the investments and how we look to do that are the other part of that equation.

The Chair: Thank you.

Colleagues, we'll move to our next round. I'm hoping to get through the first four by the time we get to the end of our allotted time for today's meeting.

We'll go to Mr. Falk for five minutes.

● (1815)

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

Thank you to all the witnesses for their presentations.

Ms. Joseph, I'll start with you. It was mentioned earlier that the cost of wind and solar is 5¢ to 10¢, and that gas is 10¢ to 15¢. Is that per kilowatt or per kilowatt hour? What would that be?

Ms. Shannon Joseph: I was impressed by the numbers some of the colleagues spoke to. What I think is important is that, a lot of the time, those numbers don't include the full cost of transmission for energy, which is going to be very distributed, and they don't include the cost of storage or the cost of dispatchable power.

We spoke earlier about those utilities and why they are saying all these mean things. Today, a lot of the renewables in Alberta are backed up by dispatchable gas plants. They sit idle, and when they come on, it's a premium cost. I don't know that there are batteries much cheaper than that. However, the point is that I don't know that this is cheap, and we shouldn't discuss it as if it's cheap. There are a lot of things to build, and there are a lot of things that don't exist yet.

Mr. Ted Falk: What is the cheapest form of energy to produce?

Ms. Shannon Joseph: Right now, the cheapest electricity is natural gas, or maybe it's hydro. I don't want to get into, necessarily, the competition. I think different energy sources are affordable in different applications, and we have to use what's best to achieve all of our goals, including our environmental goals.

In Quebec, it might be very cheap to do hydro, and in other places, but every new thing you build has to be paid for, and we have to build a lot of new things.

Mr. Ted Falk: From a capital cost perspective, there's a lot of infrastructure that's needed if we're going to keep up with the demand that we're looking at. For a capital cost investment, which is the cheapest form of energy to produce—just the capital cost, not operational?

Ms. Shannon Joseph: I don't have that number, and I don't want to speculate on it. I think it matters where you are.

Mr. Ted Falk: This committee did a study, probably six years ago, on electrical interties, and it was determined that even provincially our systems aren't compatible. Have you seen any progress in that respect over the last couple of years?

Ms. Shannon Joseph: There are provinces that share electricity today. Quebec and Newfoundland are an example. Quebec and Ontario are an example. Therefore, there are some interties. It's not a huge amount of energy that's shared between them. Again, most provinces don't have enough electricity now, so building a bunch of interties doesn't solve the problem that you don't have the generation. Again, we're talking about expanding what electricity does in a way that's never happened before.

Mr. Ted Falk: You looked at all our potential power sources for electricity that exist today. How much capacity do we have that's available, including stuff that's parked?

Ms. Shannon Joseph: The capacity that's available in terms of new build is not close to 350 gigawatts. It's not close to what we're really talking about in terms of what we would need to build.

Mr. Ted Falk: The former CEO of Manitoba Hydro says that it would take about 20 years to get a new dam from conception to producing electricity. Is that something that you would agree with?

Ms. Shannon Joseph: I would agree with anyone who runs a utility if they tell me how long things take to make.

Mr. Ted Falk: Okay.

When we look at renewables, going forward, can you talk a little about reliability and storage?

Ms. Shannon Joseph: Today, again, natural gas plays a really important role in wind integration and in renewables integration, in terms of ensuring grid stability.

The Canadian Electricity Association published a report in response to the proposed clean electricity regulations. They said that they can't ensure reliability, safety, etc., without natural gas and that they can't be told when to get rid of it. They'll get rid of it when it works for them. Manitoba Hydro put out a pretty detailed study of moderate to aggressive paths to net zero. In all of them, they need natural gas.

I think we need to be listening to the people whose job it is to provide energy 24-7 to our citizens and to ensure safety.

Mr. Ted Falk: Is net zero by 2035 a realistic goal?

Ms. Shannon Joseph: Well, we've never told anyone what the net is on net zero. What I will say is that, with regard to CER's numbers to achieve that by 2035, I'm not sure how that could be done without really high burdens of cost to the population and without impacts on quality of life and on competitiveness.

Mr. Ted Falk: I think my time is probably over.

The Chair: You have 10 seconds. Thank you.

We'll now proceed to our next speaker, Ms. Dabrusin.

Go ahead. You have five minutes.

● (1820)

Ms. Julie Dabrusin (Toronto—Danforth, Lib.): Thank you.

I think the conversation is actually pretty interesting because what we're talking about is what the fundamentals are for a clean electrical grid. We're talking about it needing to be clean, needing to be affordable and needing to be reliable. What I am hearing is people trying to wrestle with those issues.

Maybe I could start with the David Suzuki Foundation. What I seem to hear, essentially, from the last bit of evidence from Ms. Joseph is that you can't actually get those three things by 2035 in a net-zero scenario.

What do you envision when you're thinking about getting to a clean grid? What do we need to do to get there?

Mr. Stephen Thomas: The core principle here.... We already talked about policy clarity and policy certainty. I think that's one thing that the federal government can provide here—

Ms. Julie Dabrusin: Do you mind if I interrupt you on that?

What does that look like? If I were to try to get granular, what does that policy certainty look like? I'm hearing different things as to what the message should be.

Mr. Stephen Thomas: There is a range of things when it comes to funding, from actually implementing the ITCs for clean electricity to the federal government having a very clear policy framework for where Canada is headed to grow and clean our electricity system. However, it is also regulations. It is a clear policy signal, a clear target, and clear rules in the clean electricity regulations coming out this year.

For us, when we talk about envisioning what the grid could look like, we talk a lot about where things are today and why it's challenging to move forward. That's the whole point of this work; it is looking where the puck is going, not where the puck is today, if I can hazard a hockey quote.

For us, we talk about wind and solar being the cheapest forms of electricity in the world and the cheapest forms of new power that we can build here in Canada. Maximizing that and creating an electricity framework or electricity systems in provinces that can make the best use of that lowest-cost electricity is a priority.

When it comes to timing, we've also heard a lot in committee today about the long tails and the long timelines that things like large hydro dams or other large, bulky electricity systems have, and those things, I believe, are also true. That's why wind and solar, as modular, shovel-ready projects are also attractive for how quickly we need to build out electricity generation. For wind and solar, it is between two and five years for a project timeline, depending on the permitting and where things are. If we're reaching for something that we need to build quickly and cheaply, then wind, solar and energy storage are definitely priorities. That's another reason we see energy efficiency and upgrading of the grid more broadly, specifically the transmission system, as other keystones that enable that low-cost electricity to deliver when it's needed.

Ms. Julie Dabrusin: I have only two minutes, so I'm going to cut you off there and go to Mr. Pivnick with the same question.

If we're trying to get to an affordable, reliable and clean grid by 2035, when you're saying “policy certainty” and all that, what are you looking for?

Mr. Evan Pivnick: I think I'd focus on two specific pieces. First, I completely agree about the ITCs. The idea of the federal government coming in and helping fund this is about ensuring that our progressive tax system can help support the build-out of these resources. It will ensure greater equity across the board. It will not be asking the lowest-income families to bear the cost of the build-out that's required. It will actually be using progressive taxation to do so. ITCs are an incredibly important tool to put into place as quickly as possible.

Another specific example would be the SREP program, as mentioned earlier. That could be retooled to focus on demand management more directly. It could help unlock the distribution-level things that add the lowest-cost perspective, energy efficiency and distributed resources. This is really a conversation that we're very nascent in and very behind in when it comes to Canada. In Ontario, with the IESO, they've stood up one of the largest and one of the first pilots of this. They now have the ability to pull the equivalent of Kingston, Ontario, off the grid during a peak event. It's 90 megawatts. They can reduce that peak when they are seeing that climb.

Those sorts of tools are the ones that we need to be building our grid to optimize if we're really concerned about cost. I think those are two instruments that the federal government should be prioritizing.

Ms. Julie Dabrusin: Thank you.

The Chair: Thank you.

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

[*Translation*]

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

Ms. Joseph, you piqued my curiosity earlier when you gave the example of Germany. I don't know if you saw the recent article written by the person responsible for the energy transition in Germany. He said that there would be less demand for gas and that, if anything in Canada interested Germany, it was hydrogen and critical minerals. I see that European countries are trying to get involved in the transition and that their industrial strategy is based on it.

At the same time, you talked about energy costs, and I see a strategy being put in place where we are trying to significantly reduce the cost of fossil fuels. For example, we paid $34 billion for a pipeline, which is pretty obscene. In addition, there is a federal strategy for about $80 billion to be invested by the federal government in fossil fuels by 2035.

If we applied that to a world where we supported cleaner forms of energy, their cost might be lower. Do you agree with my premise?

● (1825)

Ms. Shannon Joseph: Mr. Simard, if we no longer want to use fossil fuels, that's great. What is important to me is our path toward the changes we want to make to our energy system. They have to be affordable and reliable, ensure our energy security, and so on. If some countries are closer to their targets than we are, that's fine.

Mr. Mario Simard: I am pleased to hear that. I like what you're saying. That's excellent. If we want to have energy security in Canada, we have to design it in such a way that we are competitive with other countries.

Recently, I heard people such as Suncor representatives say that they were going to set aside carbon capture and sequestration strategies because they were too expensive. Producing low-carbon oil is not profitable, and things like that should be taken into consideration.

Do you agree with me?

Ms. Shannon Joseph: I don't have an opinion on that.

Mr. Mario Simard: Thank you.

That will be all, Mr. Chair.

[*English*]

The Chair: Thank you.

I will now go to Mr. Angus for two and a half minutes.

Mr. Charlie Angus: Thank you.

I have two questions for you, Mr. Brooks. Certainly, I find that when our friends come to support the fossil fuel industry and inertia, and when they compare what we would use besides natural gas or fossil fuels, they always refer to dams. We know that hydroelectric dams are massive, huge projects, and yet in California right now, the largest contributor to the grid of California, which has a population the size of Canada, is battery power. The battery revolution is massive in both Texas and California. California is working to go from eight gigawatts to 42 gigawatts, while we're still sitting here talking about it. I want to ask you about the position that battery and wind are cheaper than natural gas.

Second, I also hear from my Conservative-minded colleagues that this is all provincial jurisdiction and we should let the provinces do whatever they want. But we are a G7 country. We have G7 obligations. We have signed international commitments. How important is it that we meet those commitments?

Mr. Keith Brooks: Thanks for the question.

As I mentioned before, the batteries here in Ontario are significantly less expensive than a new gas plant. The government issued a contract. If we want to build a new gas plant in Napanee, that plant is going to cost $1,680 per megawatt. The battery plants they offered contracts to are going to cost $680 per megawatt, so it's 40% of the cost. The batteries are significantly less expensive than gas plants. Clean Energy Canada did the analysis around this, too. If we have wind power paired with batteries, it's going to come in cheaper than gas.

Also, we know these prices are going to be set for a long time, because we're not dependent on gas, which is a volatile commodity. Its price goes up and down based on events that are beyond our control and that happen outside this country.

On your question about Canada's international obligations and the provinces, we know some provinces are not on board with the clean electricity regulations. They're not on board with net zero by 2035. I think the federal government has an obligation, and not only to do its part as a G7 country. It is a signatory to the Paris Accord. We have an international obligation to be on track for net zero, to meet the Prime Minister's commitment to a net-zero grid by 2035 and to reduce our emissions. It's not only about meeting the targets this country has set, but also about doubling down on those targets and heeding the calls to action coming from the UN Secretary-General, the International Energy Agency and everybody watching.

This climate crisis is getting worse by the day. We have to do more, and we need the federal government to exert its power to work within its constitutional authority to get all the provinces in line, as well.

● (1830)

Mr. Charlie Angus: Thank you.

The Chair: Thank you.

We're at our allotted time for today. It's 6:30 p.m.

Thank you, witnesses, for providing your testimony and appearing on this study. If you have further written submissions you would like to provide the committee, please send them to the clerk.

Thank you, colleagues. I will see you next week.

Mr. Charlie Angus: Thanks to our chair for managing to get us right down to the minute. You do your job.

The Chair: Yes, it's right down to the minute. Thank you.

Have a great weekend. I'll see you next week on Wednesday for our next meeting.

That concludes our meeting. The meeting is adjourned.