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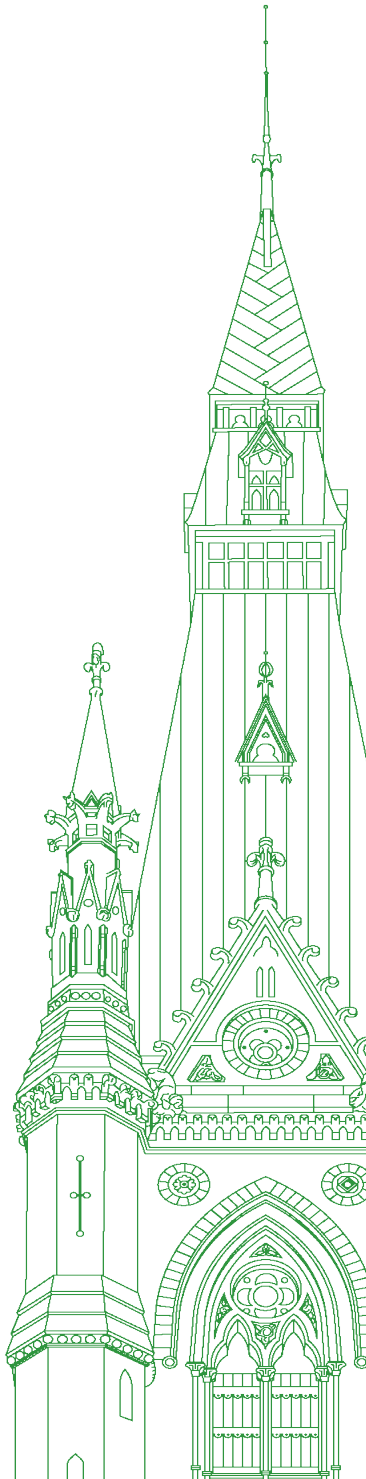

Chair: Mr. George Chahal

Standing Committee on Natural Resources

Monday, October 7, 2024

● (1105)

[*English*]

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

Welcome to meeting number 108 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.

We have a new clerk of the committee. Please welcome Thomas Bigelow.

I would like to thank our former clerk, Alexandre Vassiliev, for his dedication and hard work with our committee over the last year or so that he was with us. Thank you, Alexandre.

I would now like to welcome the witnesses who are with us today

As an individual, by video conference, we have Dr. Christina Hoicka, associate professor, Canada research chair in urban planning for climate change, University of Victoria. From the Canadian Climate Institute, we have Jason Dion, senior research director. From the Macdonald-Laurier Institute, by video conference, we have Dr. Heather Exner-Pirot, director, natural resources, energy and environment. From The Pembina Institute, we have Scott MacDougall, program director, electricity; and from the Transition Accelerator, we have Moe Kabbara, vice-president.

We will have up to five minutes for opening remarks.

I will start with Dr. Christina Hoicka, who's on video conference.

Dr. Christina Hoicka (Associate Professor, Canada Research Chair in Urban Planning for Climate Change, University of Victoria, As an Individual): Thank you for the opportunity to speak today. I'm sorry I cannot be there in person.

I want to focus my comments on the societal impacts and opportunities of an electricity transition. An energy transition to mitigate and adapt to climate change is a societal transition. Most scenarios show that decarbonizing the energy sector in Canada means doubling to quadrupling the size of the 152-gigawatt electricity system to replace fossil fuels. This transition can be accelerated and supported if policies and institutions are designed based on principles of equity, justice and resilience across society and generations.

Canada has strengths to support a transition that is framed this way. These include a history of municipal and co-operative ownership of renewable electricity sources and infrastructures; indigenous leadership and advocacy to own and operate renewable electricity resources and infrastructures; the implementation of the United Nations Declaration on the Rights of Indigenous Peoples, or UNDRIP, in law; and past experience in implementing policies to support partnerships between communities and industry.

There are also important barriers that need to be removed. These barriers that need to be removed include supports to fossil fuel use; the lack of supportive procurement policies that provide market access for renewable electricity and related infrastructure; the lack of ability for indigenous nations to own and operate their own electricity utilities; the lack of sufficient access to financial support, particularly for indigenous nations; the lack of representation of diversity in electricity and regional resource planning; and the lack of tracking of renewable electricity projects and infrastructures, particularly those that are owned and operated by communities, co-operatives and indigenous nations, and of who is impacted, which impedes analysis relevant to the creation of just policy. That is to say, currently we do not know very much about community-owned and community impacts of renewable electricity and infrastructure across Canada.

The European Union has developed policy frameworks for things called “citizen energy communities” and “renewable energy communities”. These frameworks bring together citizens, energy utilities and companies, and local governments to invest in renewable energy technologies and related infrastructure such that socio-economic benefits that flow to communities are prioritized. Canada should be investigating the value of adapting some of these policies here.

The implementation of these principles, enablers and this removal of barriers can accelerate a low-carbon energy transition to mitigate climate change by improving support and partnerships. Research shows that when fairness and transparency are present in decision-making for energy projects and electricity projects, and the impacts and benefits are distributed fairly to affected communities, social acceptance increases.

Intergenerational justice is critically required as a pillar in this transition. My research team at the University of Victoria prepared this statement: “We are a group of 10 youths, comprised of undergraduate, master's, Ph.D. students and post-doctoral researchers, who are concerned with the social and ecological impacts of Canada's current energy systems. We study intergenerational justice, energy democracy, the well-being of ecosystems and the impact that a low-carbon transition has on communities. We urge policy-makers to ensure that all communities impacted by changes to our energy system are empowered to participate in the entirety of the low-carbon energy transition. The energy transition must be more than renewable. It must be democratic, transparent and just.”

● (1110)

Thank you very much for the opportunity to speak today.

The Chair: I failed to mention at the start of the meeting that I use these two cards: Yellow is the 30-second warning, and red means that time's up. I'll try not to interrupt you mid-sentence. You were right on time, with a few minutes to spare. Thank you for your opening remarks.

We now go to Dr. Heather Exner-Pirot from the Macdonald-Laurier Institute. You have five minutes. Please go ahead.

Dr. Heather Exner-Pirot (Director, Energy, Natural Resources and Environment, Macdonald-Laurier Institute): Thank you, Chair and members of the committee, for inviting me to testify.

We often hear about the energy trilemma of the need to balance reliability, affordability and sustainability in our electricity systems. It's obvious to me that these characteristics are not three legs of an energy stool but components of a hierarchy, with affordability and reliability on top and sustainability at the bottom. This is not cynicism. This is Maslow's hierarchy of needs.

Canada is uniquely blessed to have an electricity grid that enjoys all three characteristics: 84% of our electricity grid is powered by non-emitting sources, thanks to Ontario's nuclear capacity and the country's ample hydroelectric resources. These are also cheap electricity and provide competitive industrial rates. In fact, Canada is the best performer in the G7 on both measures. On top of this, Canada's electricity industry boasts a 99.93% reliability of service rate. Our clean, affordable and reliable electricity grid provides a competitive advantage to Canadian industry and a high quality of life for Canadian citizens.

However, I fear that we have taken this for granted and are now putting it at risk. In the quest for the perfect—a net-zero grid by 2035—we will be sacrificing the good.

Due to policy choices including, but not limited to, the proposed clean electricity regulations, Canada is almost certain to have more expensive and less reliable electricity in the coming years. Perhaps the reward will be a slightly cleaner grid, but it will come at the expense of heavy industry relocating to cheaper jurisdictions with dirtier grids—a pyrrhic victory if ever there was one.

Here is what is at stake. As we have seen from our allies in Europe, high energy costs are very bad for the economy, and that makes them bad for society as well. Although that continent is adding solar and wind power at an impressive pace, it is not translating into cheaper electricity by any means. Rather, we are seeing deindustrialization in Europe. Their energy policies are a cautionary tale, not a model.

The task we set for ourselves—an emissions-free grid by 2035—is made all the more difficult by the fact that electricity demand is rising for the first time in decades. This is due to a combination of a growing population, electrification of energy use and new areas of demand such as data centres. Despite this rising demand, investment in the electricity sector in Canada is anemic. Based on Natural Resources Canada's most recent major projects inventory, the number of projects planned or under construction in the electricity sector declined, from 223 projects worth $156 billion in 2014 to 182 projects worth $98.9 billion in 2023, or equivalent to $78.9 billion in 2014 dollars. It's a 49% drop in value.

Adding even more barriers and costs through the clean electricity regulations and other policies will absolutely hamper Canada's ability to expand its generation capacity and compete for data centres and energy-intensive manufacturing. This is bad economically as well as strategically.

I will also address the risks to the way that we are planning to add clean electricity to the Canadian grid. Many environmental advocates, as well as some Crown corporations, are pushing for the majority of new electricity generation in Canada to come from solar and, especially, wind power. There are several risks to this. The first and most obvious is that they are intermittent sources, and across most of Canada the sun does not shine and the wind does not blow during winter load peaks.

To highlight the energy security costs and benefits of different electricity sources, Canada has abundant natural gas, uranium and water. Our supply chains are almost wholly domestic for nuclear, hydro and natural gas power generation. By contrast, the global supply chains for solar panels, wind turbines, batteries and electric vehicles depend, to a large extent, on China, a potential adversary on which we applied tariffs due to unfair trade practices.

Inasmuch as the federal government has jurisdiction to improve affordability, reliability and sustainability, it should be incentivizing those sources of generation that enhance rather than detract from energy security. An emissions-free grid is a commendable goal. With advanced nuclear, CCUS, hydrogen and pumped storage, we have several good options for clean electricity in the medium term.

I finish by suggesting that decisions on Canada's electricity grid should respect and defer to those charged with managing Canada's electricity grid, rather than environmental organizations. When the electricity industry says 2035 is too soon to achieve our emissions goals, I believe them. I also believe that they are acting in good faith to decarbonize as fast as is economically and logistically feasible. We'd all be better off if federal policies were directed at supporting their efforts rather than complicating them.

● (1115)

The Chair: Thank you for your opening remarks.

We'll now go to Canadian Climate Institute and Jason Dion.

You have five minutes.

Mr. Jason Dion (Senior Research Director, Canadian Climate Institute): Mr. Chair and members of the committee, thank you for the invitation to be here today to talk about Canada's electricity grid and network.

My name is Jason Dion. I'm the senior research director for the Canadian Climate Institute.

Our research indicates that, while there is a range of pathways Canada can take to achieve our climate target of net-zero emissions by 2050, one thing is certain: All roads to meeting Canada's climate goals will be accompanied by significant changes in the electricity sector. Canadian electricity systems must become bigger, cleaner and smarter, and these transformations must all happen simultaneously.

Let's start with bigger.

We are already seeing early signs of growing demand for electricity coming from industry, electric vehicles and the installation of heat pumps. We anticipate that even more demand will come as Canada continues to electrify. To meet this growing demand, we find that electricity generation will need to grow 1.6 to 2.1 times by 2050.

At the same time as electricity systems will be getting bigger, they must also be getting cleaner. This means reducing our dependence on fossil fuels for electricity generation and building up sources of clean power. Nuclear and hydro will need to maintain their important roles in providing non-emitting baseload power, but wind and solar will need to grow significantly. Our estimates show they should form 60% to 95% of new capacity added by 2030.

When it comes to clean generation, the phase-out of coal power in Canada is already doing a lot of heavy lifting. Electricity sector emissions have fallen by almost two-thirds since 2005. The forthcoming federal clean electricity regulations alongside the clean electricity investment tax credits and industrial carbon pricing will play a pivotal role in continuing this progress. Our research indicates that aligning electricity systems with the clean electricity regulations is achievable, and, in some cases, will only represent an acceleration of provincial utilities' existing development plans.

Of course, electricity needs to remain affordable and reliable. We have been pleased to see flexibilities included in the clean electricity regulations that will allow for continued use of gas-fired power when it is most needed, especially as its alternatives are in their early stages of development.

This brings us to the third part of bigger, cleaner, smarter. Investing in emerging solutions that make grids smarter or more flexible will help us reduce our reliance on gas as well as the size of the necessary build-out. These solutions include things like geothermal power, battery storage, demand-side flexibility and greater interconnection; however, as it stands, short-sighted planning risks delaying build-out of some of the bigger, cleaner, smarter electricity systems Canada needs. While some jurisdictions have long-term climate goals, none have policy architecture that sufficiently maps out its goals' implications for the electricity system. This puts utilities and regulators in a difficult position since they can lack a defensible basis for proceeding with a system build-out at the pace and scale that will ultimately be needed.

An important emerging tool called net-zero energy road maps can help address this risk. These road maps articulate a provincial or territorial government's independent vision for the evolution of its energy systems to meet climate goals by 2050. In this way, energy road maps provide signposts for the provincial utilities and regulators that will lead and oversee the build-out and a clear and defensible basis for their decision-making. Numerous provinces now have road maps developed or in the works.

For its part, the federal government can support provinces' efforts by offering sustained, predictable support for clean electricity projects. A notable example is the forthcoming investment tax credits that will allow for the capital cost of clean electricity projects to be refunded 15% to 30%. The federal government can also repurpose existing programs to enhance the build-out of smarter electricity systems by, for example, restructuring its smart renewables and electrification pathways program to focus exclusively on the deployment of demand-side flexibility, as recommended by the Canada electricity advisory council.

To be clear, provinces and territories will be in the driver's seat in this effort. Along with producing energy road maps, they are responsible for implementing electricity sector policies, establishing mandates for utility regulators, Crown utilities and system operators, and overseeing decision-making processes.

For Canada to truly act effectively on each of the moving parts of the electricity system, we need federal, provincial and territorial governments to use their policy tools in an integrated, coordinated and rapid way.

Transforming Canada's electricity systems is necessary if we are to reach our climate goals. While it is possible, it is a very large task. Acting early and wisely through smart policy that can work in the Canadian federation not only reduces the risk of falling short of our climate targets but will also reduce the cost of the needed system transformation.

Thank you again for your invitation. I'll welcome any questions you might have.

● (1120)

The Chair: Thank you for your opening remarks.

We'll now go to Scott MacDougall from the Pembina Institute.

You have five minutes.

Mr. Scott MacDougall (Program Director, Electricity, The Pembina Institute): Thank you, Mr. Chair.

Thank you to the committee for the opportunity to speak here today.

My name is Scott MacDougall. I am the director of the Pembina Institute's electricity program.

Before joining Pembina, I worked in climate policy with the Government of Alberta. I've also worked in the oil sands industry, including as the lead for a large, 800-megawatt cogeneration project near Fort McMurray, Alberta.

Pembina Institute is a national charity and a clean energy think tank advocating for strong, effective policies to support Canada's clean energy transition. Pembina was formed 40 years ago in Drayton Valley, Alberta, as a response to a sour gas blowout. It now has offices in Calgary, Edmonton, Ottawa, Toronto and Vancouver.

I'd like to talk about a few things that I think are very exciting about the clean electricity investments and prospects for Canada cementing its clean electricity advantage among investors and businesses.

According to the International Energy Agency, global clean energy investments this year are nearly double the investments in fossil fuels. Annual investments in solar photovoltaics now surpass all other power generation technologies combined.

As a result, some jurisdictions around the world are now producing upwards of 60% of their annual electricity needs from wind and solar alone. Since the costs of wind, solar and batteries are already competitive with gas-fired power and other alternatives—and their costs are continuing to drop—this is a good sign for prevailing strong investment in renewables.

Canada has a distinctive electricity system, offering many decarbonization opportunities. Currently, it's a collection of 13 unique and complex grids. While some hydro-rich regions in Canada are already benefiting from emissions-free power or have legacy nuclear, many are still heavily dependent on fossil fuels. Canada gets just under 9% of its electricity from wind and solar today, compared with the United States at 15% and the United Kingdom at 34%.

Alberta, which has led the country in wind and solar development over the past few years, gets 18% of its power from those sources. However, modelling we completed with the University of Alberta found that, by 2035, Alberta could get up to about 58% of its electricity from wind and solar. This is a fair jump from where it is today.

Based on a jurisdictional scan that we'll be publishing soon, numerous grids have already achieved that, enabled by a combination of factors, such as grids that are well connected internally and with neighbouring grids, a diverse generation mix, distributed battery and solar resources on smarter grids, and in many cases, demand-side management approaches, such as energy efficiency and demand response.

Here in Canada, the Ontario Independent Electricity System Operator's conservation and demand management programs offer some very good examples of those demand-side programs and successes.

I think it's fair to say that clean electricity is the cornerstone of a clean economy and a key driver for reducing economy-wide emissions. We are seeing many businesses looking to electrify their processes and wanting to set up shop in places that can offer clean electricity. In particular, there have been announcements recently from automakers, critical mineral producers, battery companies and data centres expressing that they want to operate on clean grids.

This indicates that investments in clean energy and the demand for it are likely to continue to rise. If we can't meet that demand, then industry will take its investments elsewhere.

Canada and the provinces have a lot to gain from clean electricity and have a lot to lose from sending mixed or negative signals and from a lack of progress in modernizing the grids to support these investments. The federal clean electricity regulations will be critical for supporting grid decarbonization across the provinces. They offer policy certainty and a strong signal to industry, and encourage increased uptake of renewables for the economic and health benefits of all Canadians.

I'd also like to note the value of modernizing our grids to ensure continued reliability and affordability. Ontario has again shown great leadership in this area, being the first province to phase out coal in 2015. Now, through its conservation and demand management programs, it has decreased demand by 15% versus what it would otherwise be today. The province is now 89% emissions-free. However, decisions made today will determine whether Ontario can maintain and grow its clean energy advantage.

● (1125)

We are fortunate here in Canada. Our abundance of renewable resources, including wind, hydro and solar, put us in a good position to operate a clean electricity grid. Canada is already 84% emissions-free. We need to scale up efforts to keep pace with global investments.

Thank you.

The Chair: Thank you for your opening remarks.

We'll now go to Moe Kabbara from the Transition Accelerator.

You have five minutes.

Mr. Moe Kabbara (Vice President, The Transition Accelerator): Thank you, Mr. Chair.

Thank you to the committee for inviting me to speak today.

My name is Moe Kabbara. I'm the vice-president of the Transition Accelerator. We're a pan-Canadian organization that's focused on helping Canada build a prosperous and competitive future by identifying pathways to net zero by 2050.

Today, I'm going to focus on three key points. Number one is that electricity will be the largest contributor to Canada's net-zero goals. Number two is that electrification is not just feasible but can also be financially beneficial for most Canadians. Number three is about an inconvenient truth: The reality is that, across the country, some regions and households will need more support in this transition, which necessitates proactive actions.

On the first point, while Canada's electricity system only accounts for 6% of our emissions, the real opportunity lies with the electrification of the remaining 94%, even if we don't get all the way to 94%. There's going to be a significant amount of electrification for transportation, heating and industry. Though there's uncertainty about how we're going to fully decarbonize all of the above options, including the ways we can generate clean electricity—and I think we need to explore all of that—it's clear that electrification will play the largest role. Study after study confirms that we're going to need more electricity, and electricity is the most cost-effective way to reach net zero.

Growth is also possible. We've been using electricity for more than a century, and that means we must also grow the grid in order to continue electrifying different end uses of energy. The same studies that we've talked about identify electrification as a key pathway, and as mentioned earlier today, we've heard numbers around doubling or tripling the size of the grid by 2050. This is definitely not going to be an easy task, but it's certainly possible.

If we look at the past, between 1920 and 1980, Canada's electricity generation grew by 7% per year, essentially doubling the system every decade for 60 years. Today, we need about 3% annual growth to achieve the doubling by 2050 to get to net zero. We've done it before at an even faster pace, and we can do it again.

The second point is around economic competitiveness and affordability. Growing the grid isn't just a climate solution. As mentioned earlier, it's also a way to ensure Canada's competitiveness. If we look at some of the investments we've attracted in the auto and battery sectors—Volkswagen, Umicore, Northvolt, Stellantis, GM and Ford—what all of these companies have in common is that they've committed to decarbonizing their operations in 2030, 2035 or 2040, but it's clear that they're looking for affordable, reliable and clean electricity for their businesses.

At the household level, our research shows that households could spend less money heating and powering their homes and fuelling transportation needs in 2050 than they do today through electrification. This is important because we're looking at some of the biggest winners in the country in Atlantic Canada, where energy cost burdens are among the highest in the country. They really stand to benefit a lot in terms of the significant savings that they could have by switching to electrification.

Other big winners are people who drive cars. If we look at gasoline vehicle efficiency, it's quite low relative to electric vehicles. Lower operating costs for EVs can make a huge difference.

The third point I want to make is that support is going to be needed to unlock these benefits for all Canadians. The transition to electrification is not all roses for everybody. While many will benefit, it's important to recognize that our analysis reveals the inconvenient truth that some regions and households will struggle to find those savings. Low-income households and those in provinces like Alberta and Saskatchewan, where there is reliance on natural gas and winters are quite harsh, face greater challenges.

However, those challenges are not fatalistic, and they're not necessarily reasons to delay. Rather, they really highlight the importance of placing policy emphasis where we can address affordability concerns and also maintain public support for the transition.

Today I have two calls for action that are specifically related to the federal government focusing on two areas.

Number one is enabling the rapid growth of the electricity system everywhere. This includes streamlining project approval, incentivizing infrastructure and investments, and ensuring provinces have the flexibility to manage their increased electrification.

Number two is recognizing that not all provinces are starting from the same point. They're going to face different challenges, so it's important to ensure we have a tailored approach that supports and targets where the need is greatest and recognizes the different starting points and hurdles that each province faces.

● (1130)

By focusing on those two areas, the government can help ensure that electrification provides benefits for all Canadians, while advancing our climate goals.

Thank you.

The Chair: Thank you for your opening remarks.

Now we will proceed to our first round of questioning, and we'll start with Mr. Patzer.

Mr. Patzer, you have six minutes.

Mr. Jeremy Patzer (Cypress Hills—Grasslands, CPC): Thank you very much, Mr. Chair.

Thank you to everybody for taking time to be here today.

Just really quickly, Mr. Dion, do you guys factor in how much carbon Canada sequesters when you do your net-zero calculations?

Mr. Jason Dion: Yes. In our net-zero analysis, we took a look at the national inventory report and the emissions it reports, as well as all the sources of emissions that get reported in that inventory now and going forward. The amount of flux that is going on in natural systems is excluded from those inventories typically if it's not happening on managed lands. The amount of net sequestration we can claim as a result of, for example, wildfires is not included. The amount of net sequestration we can claim that's been historically locked in our soils is not included in those emissions inventories.

It does focus on the amount of flux that we can control and measure.

Mr. Jeremy Patzer: Okay. Yes, I find that interesting. I did actually ask the government for information on what farmland does, and they don't track it. They have no idea. I wanted to see who's tracking what and see who has an idea of what sequestration actually does for net zero, so thank you for that.

To the Macdonald-Laurier Institute, what problems are we going to have with grid capacity if we double or triple the demand for electricity? What kinds of issues do you think we're going to encounter if we try to do that?

Dr. Heather Exner-Pirot: I'm not an economist, but it's basic supply and demand that costs will go up and people will have to use less energy. In Canada, we're probably the most energy-secure country in the world. We've had, again, this fantastic energy system that was cheap, affordable and pretty sustainable, and that's at risk.

Number one, if you want to look at Europe as a model for what happens in these situations, heavy industry decreases its energy use first. I think grid operators—and someone can correct me if I'm wrong—will usually prioritize residential users over industrial users. Compromising our ability to build—and we all know it's difficult to build in this country—is reducing the amount of capacity we can add. We all know we want to increase the capacity for our electrification goals. That's not happening, so I can see prices going up and heavy industry moving somewhere else.

Mr. Jeremy Patzer: System operators in Ontario, as well as Alberta, have publicly raised concerns that they could not follow these electricity regulations without impacting the grid's reliability. Do you have more to add on the risks to grid reliability?

● (1135)

Dr. Heather Exner-Pirot: I think rotating brownouts is what grid operators would do. Again, from an industry perspective, if you can't rely on the electricity, then that's a cost and that's a concern. We are seeing, for example, in Quebec, which has had very low industrial prices and a high capacity, that they're now reaching the maximum of the capacity they have. That is discouraging investment, discouraging heavy industry from moving there.

Then there's the Canadian aspect. Some of us from Alberta had the problem when in January it was -46°C in Edmonton. The grid was at capacity. We had the emergency alert. Thankfully, everything worked out and people turned off their Christmas lights and stopped doing laundry and that kind of thing. However, you can imagine the situation when people, for a few hours, would be without electricity in a -46°C situation. This is a life or death situation for many parts of Canada.

Mr. Jeremy Patzer: Yes, Boundary Dam, in Saskatchewan, had to fire up one of its coal systems in order to help out with what was happening in Alberta on that particularly cold day.

Dr. Heather Exner-Pirot: We appreciate that.

Mr. Jeremy Patzer: On the 2035 emissions-free grid target, you mentioned how, for example, Quebec is approaching capacity. We know they rely heavily on hydro power, which is great. However, if we were to build a bunch of hydro dams to try to meet that target, do you think that's even possible to do?

Dr. Heather Exner-Pirot: I think the consensus is our greatest hydroelectricity capacity has been tapped. The last few mega-hydroelectricity projects in Canada have been very expensive. We've seen that in B.C., in Manitoba, in Labrador and elsewhere, so that's not going to be the source of the next doubling or tripling of our grid.

From my perspective, renewables are pretty expensive. They're intermittent. You need to pair them with batteries. Batteries usually only last for a couple of hours. They don't work great at -40°C either. I think in Canada nuclear is the most obvious situation to proceed with the clean electricity grid.

Mr. Jeremy Patzer: You mentioned the need to balance reliability, affordability and sustainability. Do we have a sense of how Canadians prioritize those things? Have you done any research on that, or do you know of any that's been done?

Dr. Heather Exner-Pirot: Lots of pollsters do this. I can highlight two. One is from Abacus Data. It came out last week, if anyone saw it. It said that Canadians' concern with climate change dropped 14 points in the last year. We've seen decline in support for the carbon tax, again related to affordability issues. My institute and C.D. Howe did our own polling with Nanos. We commissioned Nanos to do some polling. They found that the top energy concern for Canadians was affordability, followed by reliability, followed by safety, actually, with sustainability ranked fourth. It was the lowest energy concern of those four.

It's not that Canadians don't care about climate change. I certainly care about climate change. It's that if it's not affordable first, the attention and the resources we want to put into sustainability will certainly fall down the totem pole.

Mr. Jeremy Patzer: Thank you very much.

The Chair: Thank you.

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

You have the floor, sir.

Mr. Peter Schiefke (Vaudreuil—Soulanges, Lib.): Thank you very much, Chair.

I'd like to add my welcome to all our witnesses today.

I'll start my line of questioning with you, Mr. MacDougall. You wrote, “Canada’s draft Clean Electricity Regulations...released in August 2023 were a meaningful and ambitious effort by the federal government to balance the need to reduce emissions with an affordable and reliable clean grid”. Can you elaborate on that?

More specifically, for the analysts who will be putting together the recommendations, what aspects of those regulations do you think will be most effective in helping us achieve our goals and that we can perhaps even enhance and modify?

Mr. Scott MacDougall: Sure. Thank you for the question.

I'll just zoom out a tiny bit from the question for a second. Around clean electricity investments and progress towards a net-zero grid, I want to talk about the incentives for that. I think the primary incentives driving that shift will be coming from the carbon pricing systems, especially the credits trading that will be going on within those systems. That will do the lion's share of the work to drive the emission reductions. As well, the investment tax credits that are being brought forward, or are in place, will do a lot to drive those incentives.

Those won't create a lot of certainty about the timing of the investments around clean electricity. I think that's where the clean electricity regulations will come in. They provide some certainty around timing and end points in terms of emission performance for gas in the system. That really sends a strong signal, driving some certainty into investment.

Thank you.

● (1140)

Mr. Peter Schiefke: Thank you.

Mr. Dion, I guess I'll ask you the same question. I love what you said about bigger, cleaner, smarter. What are your thoughts on the clean electricity regulations that have been put forward?

What do you think will be the most interesting and impactful components that perhaps even need to be bona fide or enhanced?

Mr. Jason Dion: I would agree with Mr. MacDougall on that the fact that these regulations will provide certainty. It is certainly sorely needed. At the same time, I also want to underscore that they're designed to be flexible. A lot gets made out of the net-zero emissions from the sector by the 2035 target. This is a target shared with the rest of the G7. In the current and evolving design of the clean electricity regulations, the idea is very much that it's not a sort of drop-dead date for gas generation. There's a phase-out going on past that date, and gas can continue to operate in emergency circumstances, within limits, when it's most needed.

That level of flexibility, that recognition that reliability is paramount in the management of electricity systems, is certainly really important. At the same time, we want to be making the most economical and optimal use of gas-fired generation that we can. These regulations help incentivize greater reliance on renewable forms of electricity as well as other sources of flexibility outside gas generation. I think continuing to explore that flexibility in ways that balance the competing priorities that the regulations are after will be helpful.

Mr. Peter Schiefke: Thank you.

I have a different question for both of you. How important will carbon pricing be to bringing in that investment that we're going to need to see grow over the next five, 10 or 20 years? How important will carbon pricing be to that?

I guess I'll start with you, Mr. Dion. Then we'll turn it over to Mr. MacDougall.

Mr. Jason Dion: I think it is very important. That signal that comes in the form of carbon pricing, the excess credits that the sector can generate and sell to those that are regulated under those systems, provides a revenue stream. In Alberta it's been extremely helpful for securing finances. I think it is extremely important.

My organization has done some work on ways in which those systems could be strengthened to provide greater incentives and reduce uncertainty, but certainly the price incentive that carbon pricing provides is a really important complement to the regulations, as are the proposed investment tax credits that help defray some of the costs.

Mr. Peter Schiefke: Thank you.

I will turn it over to you, Mr. MacDougall, for your thoughts on that as well.

Mr. Scott MacDougall: Yes, I absolutely agree with Jason.

Having worked in Alberta's TIER system as well as its predecessor pricing systems, I would be the first to admit that some changes are going to be needed in there. They're going to need to strengthen that existing system.

I think some folks have probably seen some of the news articles lately about the very low credit prices right now in the TIER system. Doing some things to strengthen the stringency—I guess that's sort of the technical term—for that system is going to be critical to soak up some of the surplus supply of credits, especially as companies continue to invest in line with their net-zero goals. Demand for credits is going to continue to go down as emissions come down and generation of credits is going to go up. The systems are going to need to adapt in line with that to keep a bit of a market balance around those credits.

That's sort of the key change that's going to be needed. Thank you.

Mr. Peter Schiefke: Thank you.

Mr. Dion, you had said that your organization has done some research and work on this.

Can you share that with the committee, please, so we can use that information perhaps in our analysis in the report that we're going to put forward?

Mr. Jason Dion: Yes, absolutely. We have some research on large-emitter trading systems and how they can be managed and regulated in a way to shore up the market for credits in some of the ways Scott was talking about.

Mr. Peter Schiefke: Thank you very much.

The last question I have, if I have some time, Mr. Chair, is for Dr. Exner-Pirot.

You mentioned the situation in the winter when it was -35°C and below, where there was a crisis, essentially. We weren't sure whether or not we would have the electricity necessary to heat homes.

Are provinces making sufficient investments and supports for transmission and generation, or is this mostly driven right now by the federal government?

The Chair: Mr. Schiefke, I'm sorry to interrupt. We are over time.

Mr. Peter Schiefke: Mr. Chair, it was such a good question and Dr. Exner-Pirot looked so enthusiastic about answering it.

● (1145)

The Chair: Give a very quick answer, if you could, Ms. Exner-Pirot.

Dr. Heather Exner-Pirot: I'll do a quick answer.

Of course, the electricity grid is not mostly the federal government's responsibility. That was, you know, the Alberta operator.

The good news is that we have had quite a bit more generation come online in Alberta, so we don't expect to see a crisis of that kind for many years.

Mr. Peter Schiefke: Thank you for your generosity, Mr. Chair.

Thank you, Dr. Exner-Pirot.

The Chair: Thank you.

I will now go to Mr. Simard for six minutes.

[*Translation*]

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

My question is for Dr. Exner-Pirot, from the Macdonald-Laurier Institute.

I am a bit skeptical about the information you shared. You seem convinced that Hydro-Québec has reached a breaking point when it comes to electricity production. I understand that for many projects there is an attempt to have blocks of energy in Quebec, but there is also considerable growth.

You may have already consulted Hydro-Québec's 2050 plan. My region, Saguenay—Lac-Saint-Jean, already has wind farm projects. For Quebec as a whole, the plan is to produce more than 10,000 megawatts of new wind power capacities.

I am a bit skeptical when you say that Hydro-Québec has reached a threshold with respect to its hydroelectricity production capacities. Can you tell us where you got that information?

Dr. Heather Exner-Pirot: Thank you, Mr. Simard.

[*English*]

Quebec's hydroelectricity resources are a jewel in the Canadian electricity grid. I don't mean to diminish it.

As you've acknowledged and as Hydro-Québec has acknowledged, it is reaching the end of its current capacity and needs to add, at great expense, some additional capacity. As far as I've read, the dollar figures are in the tens of billions of dollars to add greater capacity in the coming years. That will increase rates, certainly, for Quebec ratepayers. That will certainly be probably a deterrent to industrial users.

However, because Quebec's power is so cheap, perhaps there's still an advantage.

[*Translation*]

Mr. Mario Simard: I would like to reframe the discussion. Hydro-Québec has a growth plan and is rejecting certain industry projects that want access to blocks of energy because there are too many projects. That adds a bit of nuance to what you said in your presentation.

You talked about what is going on in Europe, where industry projects that call for a lot of energy are being outsourced. Several heavy manufacturing companies, in Germany in particular, try to outsource their projects and are wanting to set up in Quebec because of its clean energy. Unfortunately, these companies are not looking to set up in Alberta. I find that odd.

Why do you think that the companies planning heavy manufacturing projects are not looking to set up in Alberta where there is energy and gas?

[*English*]

Dr. Heather Exner-Pirot: I guess we can make this into a Quebec-Alberta situation. For my part, I hope that Quebec has very competitive electricity rates and can attract heavy industry from Europe and elsewhere. On the Alberta side, there is some excess generation now, and there is, as I understand it, even five gigawatts in the interconnection queue of data centres. There are some problems to the clean electricity regulations that does cause uncertainty for creating more generation.

We have very cheap natural gas. All of Canada benefits from B.C.'s and Alberta's natural gas. It's pretty much the cheapest in the world. If we can turn that into power generation, we could probably attract a lot more data centres and power artificial intelligence. I hope that Quebec can also do that.

I guess the overall concern is that, if electricity across Canada, through things like the Canadian clean electricity regulations, are made more expensive, we will all be less competitive.

[*Translation*]

Mr. Mario Simard: Perhaps I was not clear. I apologize.

I simply wanted to shed light on something. Large companies that specialize in heavy industrial production in Europe are outsourcing because they are trying to access energy at a lower cost, which goes without saying. This is especially true when they want access to clean energy. That is what we are seeing today. Countries that can provide clean energy have a clear competitive advantage.

It annoys me when people talk about our power grids being risky in the winter. That is a not true.

I am not sure if you know, but the duration of peak demand in Quebec is estimated to be about 50 to 100 hours a year. Pressure on the network in Quebec intensifies during that period.

A country's entire energy structure cannot be designed around a period of 50 to 100 hours a year. Some companies are putting measures in place. For example, some paper mills are able to redirect some portions of their hydroelectricity to Hydro-Québec to alleviate pressure during that peak demand period.

I would encourage you to be careful about suggesting that people may not be able to heat their homes during winter for lack of access to hydroelectricity. It is important to understand that these are very short periods and our energy structures are increasingly resilient. They are able to get people through these periods.

It seems like this type of rhetoric is being used to demonize clean energy a bit.

Do you agree?

● (1150)

[*English*]

Dr. Heather Exner-Pirot: Not to argue with you, sir, as a reply, it is clear to me, looking at Hydro-Québec's plan, that electricity in Quebec will get more expensive in the coming years. Hopefully, we can maintain reliability.

Across the country, of course, there are differences. Quebec has exceptional resources that are clean and cheap. Not every province has those same resources, and the clean electricity regulations certainly impact different jurisdictions differently. I, for one, am hopeful that Quebec can maintain very cheap industrial electricity rates and continue to attract heavy industry.

The Chair: Thank you.

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

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

I'll start with you, Mr. MacDougall.

Pembina Institute had a fascinating editorial in The Globe and Mail this past week about how much Alberta has lost out in its clean energy advantage since Danielle Smith sent the signal that this was not a province open for business.

In 2022, I was meeting with all manner of investors and people in the clean energy sector, and they were telling me that Alberta was globally unbeatable because of the highly trained workforce and its energy expertise. Also, the land itself was set for this revolution in clean energy.

Has Pembina tracked how much investment has been lost since the Conservatives made it clear that they did not want clean energy in Alberta?

Mr. Scott MacDougall: Yes, since the moratorium was announced, which I think was the trigger for the sort of chill in investments, we found that there was an initial surge of applications in Alberta for renewables projects trying to get grandfathered under prior rules, but since then, about 55 projects announced cancellations. When you turn that into a rate based on the number of projects in the queue, that's a record high level of cancellations. It worked out, if memory serves, to about $33 billion in potential investment.

Mr. Charlie Angus: Thirty-three billion dollars was lost.

We were certainly talking to people who were saying they were taking their money stateside, but are there other provinces stepping in to take what would have been the Alberta advantage?

Mr. Scott MacDougall: Yes. Looking at British Columbia, for example, B.C. Hydro's call for renewable projects in general saw three times more energy proposals being brought forward than what they were looking for. That was fairly successful.

Quebec just announced 1.5 gigawatts of wind projects that were successful in their recent call.

In the period since the moratorium was triggered in Alberta, if you look at the United States compared to Alberta—you have to scale for the population size, the U.S. being about 100 times bigger than Alberta—you see that they saw 10,000 times more investments in renewables than Alberta did.

● (1155)

Mr. Charlie Angus: We've heard from some witnesses here that, if we invest in clean energy, we're going to be stuck with rotating brownouts.

Alberta couldn't keep the lights on in January. Was that because of clean energy?

Mr. Scott MacDougall: No, that was primarily record-high demand.

Mr. Charlie Angus: I'm wondering, because Quebec hydroelectricity is seven cents a kilowatt-hour; Manitoba, 10¢ a kilowatt-hour; British Columbia, 11¢ a kilowatt-hour; Ontario, 14¢ a kilowatt-hour; and Alberta, 26¢ a kilowatt-hour. People are paying an awful lot of money, yet they couldn't keep the power on with natural gas.

I question the Alberta advantage here and the lack of vision. We see Texas now—40% of its energy is being generated through clean energy with huge cost savings for families. Are we just missing the boat here?

Mr. Scott MacDougall: Yes, I think so. That's one of the reasons we're working on a jurisdiction scan, because I think we lose track of what's going on in other places.

Alberta went from 5% to 18% in 10 years on renewable energy on the grid. In the same period, California went from 13% to 36%. Texas went from 12% to 36%, and Ireland, 25% to 42%. I can go on, but there—

Mr. Charlie Angus: I'm going to switch to Mr. Kabbara on that same point.

What we've heard from some of our witnesses is that, if we invest in renewables, we're going to chase away all our heavy industry and the end of the world is going to come—and the frogs and the locusts and stuff.

California, which is moving towards 100% renewable, has an economy that's 1.7 times greater than Canada's. A lot of that's being driven now by the battery revolution. Is it just too difficult for Canada to compete?

If California, in five years, increased their battery storage capacity 10 times, are we just ragging the puck here?

Mr. Moe Kabbara: The battery industry and the investment attraction that we've done in Canada for the battery sector highlight the importance of transforming the auto sector here in Canada, essentially in southern Ontario.

Including additional types of generation to ensure reliability and affordability, including batteries for firming up capacity, is something that we're seeing in all jurisdictions. That definitely comes with a cost. We need to recognize that. We need to be very clear about the additional costs. When we're looking at wind without batteries, it's much cheaper. If we want to add firm capacity, it will increase the cost.

One thing that is happening is that we're seeing a level of innovation happening in battery technology that is quite fast relative to other types of technology. That's mainly because batteries are modular, and there's an economy of scale that happens that you can't really get with large, one-off projects. Investing in battery innovation, specifically grid battery innovation, is going to be critical to ensuring we can still provide clean but also affordable electricity.

Mr. Charlie Angus: Thank you very much.

The Chair: Thank you, Mr. Angus.

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

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

Thank you to all of our witnesses for their presentations.

Mr. Kabbara, I'd like to start with you. You just made a comment that wind on its own is pretty cheap, but if you put it in combination with battery storage it significantly increases. How much does that cost increase with wind and battery?

Mr. Moe Kabbara: There's no single number. It really depends on the system level. Definitely, we need to ensure that, when we're talking about the cost of wind or the cost of solar, we're differentiating that from wind plus batteries.

Mr. Ted Falk: At today's cost for producing batteries and storing energy in batteries, what does it cost? How much does it add to the cost?

Mr. Moe Kabbara: I can't give you a single number. It really depends on the type of system that you're operating on.

Mr. Ted Falk: Is it a lot, a little? Does it double the cost?

Mr. Moe Kabbara: It does not double the cost.

Mr. Ted Falk: It doesn't double it.

Mr. Moe Kabbara: It depends. It's somewhere in between 20% to 50%.

Mr. Ted Falk: Thank you.

Dr. Exner-Pirot, thank you for your comments.

I'm looking at the brief that you submitted here. You indicated that, in 2014, there were 223 projects, and that has dropped now to 182 projects in the construction of electricity production. Is that because projects have been completed, or is there another reason for that drop?

● (1200)

Dr. Heather Exner-Pirot: There were probably multiple reasons, and I think that Electricity Canada has a pretty good brief on some of the headwinds facing them.

I think one is that, again, the cheapest hydroelectricity or the best hydroelectricity resources have been exhausted, so we aren't building as much hydroelectricity as we used to. There was quite a sharp decline in hydroelectricity. Nuclear also faced some headwinds, so there were not a lot of nuclear builds, but that's increasing. That is one bright spot, I would say, in Canada's electricity grid right now: the refurbishments in Ontario.

Also, there are permitting and transmission costs. All those kinds of things have provided headwinds. As well, there was probably more industrial demand in 2014. That was a period of relative economic boom in Canada. There was a significant heavy industry, with a lot of build-out, for example, in the oil sands, and that has decreased over the last 10 years.

It's some combination of all those factors.

Mr. Ted Falk: When you look at Canada's electricity grid and consider the two different components of it, one in electricity generation and the other in electricity transmission, where do you see that the focus should be today?

Dr. Heather Exner-Pirot: Again, one part that I think is often missing from our discussions on Canada's electricity grid and energy systems is independence—energy security independence. There is certainly a role for solar and wind. In a sunny place like Texas or California, solar is good.

We've already seen the Government of Canada—and this has happened with bipartisan support—place tariffs on Chinese wind turbines, on Chinese solar panels, on Chinese electric vehicles, and probably on some battery components and critical minerals coming up. The United States has already done that.

Seeing where the puck is going geopolitically and wanting to make sure that we are insulated and drawing on our strengths.... Canada has tremendous strengths. We have very rich deposits of uranium. Our nuclear supply chain is almost fully domestic. We have incredible natural gas. If we can get carbon capture prices down, then natural gas will become extremely competitive also. We need to play to our strengths rather than rely on global supply chains, which are highly vulnerable.

Mr. Ted Falk: I'm wondering whether you have done an analysis on the cost of production, taking into consideration both the capital costs and the operating costs of the different sources of electricity. Do you have a scale on what types of energy costs, what amount...?

I understand that there are some geographical differences, but when you look at Canada as a whole, do you have a chart that would show the different costs of production, including the capital costs, between coal, gas, wind turbine, hydroelectricity and nuclear?

Dr. Heather Exner-Pirot: I do. The Macdonald-Laurier Institute recently commissioned a paper from Edgardo Sepulveda, an economist in Ontario. It is focuses on Ontario, but the nice thing about Ontario—it's great—is that it is very diversified. It has all these different sources.

There is a chart. They're looking at the different costs of different kinds of electricity. Certainly, hydro is very cheap. Nuclear is the next cheapest, then gas, then wind and then solar. Looking at the costs being paid today—

Mr. Ted Falk: I have a final question, but could you provide that to our committee, please?

Dr. Heather Exner-Pirot: I'd be happy to.

Mr. Ted Falk: My final question is this: When you look at the clean energy regulations, what do you see is the biggest impediment to further developing our energy sector?

Dr. Heather Exner-Pirot: Again, I defer to the electricity industry on this. This is what they are saying in their brief, and I'm sure some of your other witnesses.... It causes a lot of uncertainty. It's imposing unrealistic expectations, especially in parts of the country where the strengths, historically, have been in coal and natural gas, where they don't have great hydro resources. Nuclear is still expensive. We're probably a decade away from really applying nuclear in those provinces. It's just having to be reasonable with the timeline it takes and the logistics it takes to actually build out generation to the scale that we're talking about.

The Chair: Thank you.

We'll now go to Ms. Dabrusin for five minutes.

Ms. Julie Dabrusin (Toronto—Danforth, Lib.): I have a few questions.

I was really interested in some of the conversation about industry, because we're hearing two different things today. One is from the Macdonald-Laurier Institute, which says that if we move towards a cleaner grid with the clean electricity regulations, we're going to push away industry, but I've also heard from the three people here at the table that, actually, this could attract industry and industry is looking for places to invest where there's a clean grid.

I'll start with Mr. MacDougall and then go to the rest of the witnesses. How do you counter the comments being made that, if you move to a clean grid in Canada, you're actually pushing away industry?

● (1205)

Mr. Scott MacDougall: That's a great question and a challenging one.

Part of it comes down to cost assumptions around what's going to impact electricity costs and what's going to be.... For example, we're hearing today about potentially very high costs for wind and solar. I'm very curious to look into the Macdonald-Laurier Institute's numbers from Edgardo to try to understand why they're so different from what we're seeing in other costs from different grids throughout the United States, for example.

Published costs for energy from wind and solar generation are generally a lot lower than other sources of generation, including when compared with gas. There are always ranges of costs, but those ranges, as far as I've seen, are generally lower than the other options. I think maybe there are some math differences to try to understand here.

Also, we're seeing in some of the announcements of a lot of industry investments, especially in Ontario and Quebec lately, that the fact that the provinces have very clean grids was pivotal in some of those investment decisions. I think that's another point that needs an underline.

Ms. Julie Dabrusin: Thank you.

Mr. Kabbara, go ahead, please.

Mr. Moe Kabbara: I'll reiterate what I highlighted in my opening remarks.

What we also need to understand is that companies are looking for clean electricity given the commitments they've made. Most importantly, as was highlighted earlier, they are looking for reliable and competitive electricity. I think that when we're looking at VW, Umicore and Northvolt, they've all had commitments to their shareholders and corporate commitments in terms of where they want to clean up and fully decarbonize their operations. Ultimately, they're still going to have to answer to shareholders in terms of the costs of electricity that they're going to be paying.

It's really making sure that we're all able to stay competitive by attracting investments for those companies that are looking for clean electricity while also ensuring that we're providing electricity at a cost that is competitive relative to other jurisdictions. In this world of investment attraction, the cost of energy, and electricity more specifically, is going to be critical.

We are seeing this trend, but it's really not just one or the other. Combining both cost and cleanliness is really the challenge. We need to ensure the pathways we're on can help find that right balance.

Ms. Julie Dabrusin: Next, I will go to the Canadian Climate Institute.

I understand from the report you recently released, if I read it correctly, that most of our emission reductions in Canada are due to our cleaner grid and a move away from coal-fired electricity. What do you have to say about industry?

If I can tie in one last piece for you, we've been seeing a lot of comments on what the federal government can do to encourage a clean grid. Are the provinces doing enough to get us there and to attract this industrial investment?

Mr. Jason Dion: It's correct that we found in our research—and this is available on the public record in emissions inventories—that the electricity sector has led in terms of emissions reductions, reducing by almost two-thirds since 2005. That's a huge success story, and most of it, if not almost all of it, is due to the transition from coal to gas, so it's great that we've been able to make a lot of headway.

As we look further out, we should remind ourselves, as we imagine what it would mean to use less gas, that many voices were similarly concerned about what a transition from coal to gas would mean for reliability and costs. I don't want to equate the two transitions—they are different from one another—but there's always some hesitance and understandable and appropriate reluctance when we want to do a transition in a sector as vital as electricity.

As we think about what it means to use less gas and to attract investment, I think we should remind ourselves that it's about unlocking the low costs of renewable power. I agree with Mr. MacDougall: Most of the research I've seen says it is the lowest source of new power, but there's also the cost of integrating that into the grid.

For grids with low shares of renewable electricity, the integration challenges aren't that large. As those penetration rates rise, you get more and more renewables and you need to start thinking about things like, “Do you have non-emitting dispatchable generation?” Well, if you're lucky enough to have hydro, great, that's your source. If it's gas, well, some amount of continued use of that is allowed under the clean electricity regulations. However, there are other ways to match and offset the variability of renewables, whether that's batteries, greater interconnection with other jurisdictions or emerging solutions like demand-side solutions.

I agree with the witnesses beside me that it can be hard to parse what motivated an investment decision from a big global company, from an industrial player, but certainly there's enough anecdotal evidence that clean electricity is motivating it. We can even look to Alberta, which is seeing interest in its jurisdiction because of the ability that companies have there to procure renewable power directly from providers. That doesn't exist in every province, but you find it there. That's one reason they're seeing interest.

● (1210)

The Chair: Thank you.

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

[*Translation*]

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

Gentlemen, I will ask all three of you the same question.

Canada is in a situation where if it wants to attract companies that have heavy industrial production, it needs to offer them clean energy at a low cost. I get the impression that is what all these economic players are looking for.

In your opinion, what solutions are available to us? You talked about solar energy and wind energy, which supposedly would cost a bit more. However, if we stick with traditional energy, in other words, gas, with carbon capture and storage strategies, will the cost not be just as high or higher?

Is that truly what the large companies are looking for, the ones that are outsourcing their activities in Europe?

I would like your observations on this.

[*English*]

Mr. Scott MacDougall: I'm going to break my answer into two parts. One is on the generation side and the other part is on the modernizing-the-grid side of things. I think both of these things will be part of the solution.

On the generation side, yes, carbon capture and sequestration on gas-fired generation is a smart move and, where it makes sense and it's justified by companies to go forward, I think it's a good add.

Like I said in my opening remarks, Canada has 13 very different grids. They're all complex in their own ways. Some of them are going to need a certain amount of gas online for, probably, a good long time. It will be used less, but it will be more important to provide reliability services to those grids as the investment continues to put on a lot of wind and solar. Then, the grids are going to need to modernize to be a lot more flexible and co-operate a lot better across borders.

Mr. Moe Kabbara: I think we need to have all of the above options, depending on the jurisdiction. With carbon capture, SMRs and hydrogen, even for peaking plants we don't really have the luxury of completely ruling out any option, but the level of investment that we have in these options should be proportional to their contributions.

The Chair: Thank you.

We now go to Mr. Angus.

[*Translation*]

Mr. Mario Simard: Mr. Dion could provide us a response in writing.

Thank you.

[*English*]

The Chair: We are over time. Maybe on the next round we can get him to answer.

Thank you.

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

Mr. Charlie Angus: Thank you.

I'd like to ask Professor Hoicka a straightforward question.

Since the Trudeau government signed its legally binding obligations at Paris, oil production has increased 25%. Now with TMX, we're going to see a much bigger increase, despite our global commitments. What we're told is that carbon capture will somehow make it possible to continually increase fossil fuel production, while decreasing emissions. It's the “drinking your way to sobriety” approach that the Liberals have taken.

Professor, you were one of the key signatories to a letter signed by 400 scientists and experts calling on Deputy Prime Minister Chrystia Freeland not to give huge subsidies to big oil industry for carbon capture because you said it was a failed technology. Can you explain what your concerns are?

Dr. Christina Hoicka: Yes, absolutely.

We always have to look at technologies within the portfolio that they operate in. Carbon capture, utilization and storage, at this stage, has not been proven to work particularly well in most of the projects it has been seen in. We cited a study in the United States that was to that effect.

On the other hand, we have a lot of technologies, which the other witnesses have already spoken about, that are available. They're on the market, they're cheaper and they can be built fairly quickly. When we think of our portfolio of options, we have to look at market readiness. Carbon capture, utilization and storage just isn't there.

● (1215)

Mr. Charlie Angus: I just look at the emissions coming out of the oil industry. If they actually were good corporate citizens and they were really concerned about not burning the planet, they could have put some of that money in...and they haven't.

We haven't seen emissions decrease. Canada is the only G7 country where GHG emissions from the energy sector continue to rise. Is that not correct?

Dr. Christina Hoicka: I have not looked at the latest numbers. The last time I checked, we had plateaued. I think we also need to be taking into account exports of fossil fuels and the fact those will be burned and used potentially, or probably not, with carbon capture, utilization and storage.

We need to really consider the economic risks of continuing with that path of exports.

The Chair: Thank you.

We'll now go to Mr. Dreeshen for five minutes.

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

We're certainly hearing some interesting commentary.

The last witness spoke of exports of fossil fuels. They are going to be burned, but we'll have some other country do it rather than Canada, where Canada has probably the greatest ability to capture greenhouse gases and certainly cares about doing that. Just pushing the production to some other country doesn't make a lot of sense to me.

There was also a comment earlier about pushing away industry in Canada. It's not solely based on energy costs. It has a lot to do with productivity, resource development, consistency and so on. There are a lot of different factors, so I don't think that we should look at that.

The other thing that was mentioned was wind and solar and the moratorium that had taken place in Alberta. The point there was to look at land use and the management of it. For someone who sees the solar panels and sees the windmills.... I can look at an oil and gas site, and it would fit in this little circle that we have here. We're trying to make a comparison of the actual impacts that we have.

I'll get to a question in a moment.

One thing we never seem to talk about is measuring the energy requirements that are there from the first shovel you use to dig up a project when you're going to start building it, all the way through until the very end when you have to decommission it and send the product you have...and put it away. We all seem to say that this is how much energy we're going to get from this while it's working. No one ever seems to come up with the other side of it to make the measurement accurate. That's a major concern I have.

It's great that we talk about the fact that Canada has all of these fantastic mineral deposits and so on, but the other part is that it takes us so long to get anything done. I don't know how we think that all of a sudden environmental groups are just going to sit back and say, “You go for it because we need to have this”.

Dr. Exner-Pirot, could you speak a bit about the risk we have as we depend on Chinese supply chains? Is there a way our governments and utilities can prioritize those things we do have?

That's the concern I have. We're saying we would sooner get it someplace else and that, if there are going to be problems with Chinese production and bringing that in, we'll come up with a different plan. I'd like to know where that plan is going to come from.

I'll turn to Dr. Exner-Pirot, first of all, please.

Dr. Heather Exner-Pirot: I think there's general consensus. It's certainly not an outsider, rogue opinion that China dominates much of the supply chain for many renewables, from critical minerals to the development, the processing and the manufacturing of wind turbines, solar panels, EVs and batteries.

China calls that their new trio. It's been a very strategic endeavour by them to dominate global supply chains in those aspects, and now we are seeing that they have oversupply and they are dumping. The Canadian government has taken efforts to punish those or to deter those through tariffs, and so has the United States. This week the European Union has also done so, so it is very well recognized that this is an issue.

Canada is also rich in critical minerals, but we don't process hardly any of the critical minerals that we do process and, in terms of the ones that are useful for the energy transition like copper, nickel, graphite and cobalt, those are mostly down by double digits. Copper production in Canada since 2012 is down by 9%. Cobalt and nickel are down by almost 40%, so we are not producing the minerals for ourselves. We are not processing them here either, so we are dependent on China. Even where there are tariffs, and even where you might get them from other Asian countries like Vietnam or Indonesia, there's still a supply chain behind that where a lot of the components come from China.

In terms of thinking of North American energy independence, we are very interdependent with the United States with our grids, our pipelines, our refineries—all of our systems. We really should be looking, and we are looking. People are very much concerned in Washington and elsewhere about making sure that we are independent here and that we don't need the shipping. Also, if there was a war in south China, that would obviously impact their ability to ship product from China, not to mention the sanctions that would probably have to be imposed.

Here we have natural gas. We have everything we need for nuclear. We still have that great hydroelectricity as a backbone, so we could use those strengths to build up our energy system and maintain that energy independence. We saw with Europe what happens when you are energy dependent and you're dependent on your adversary.

● (1220)

Mr. Earl Dreeshen: Thank you.

The Chair: Thank you.

We'll now go to Ms. Lapointe for five minutes.

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

Throughout this discussion, I'm really struck by the notion of balance, the need not to ignore climate change, the need to try and minimize the financial hardship that can create for Canadians and the idea of balance and supply.

My question is for Dr. Hoicka, and the same question goes to Dr. Exner-Pirot.

Can you share your thoughts with this committee on infrastructure and resource balance as we transition to a clean energy economy? How do we ensure that we have enough capacity to heat homes, power vehicles and so on?

Dr. Christina Hoicka: On infrastructure, my testimony has really focused on social acceptance, the flip side of that being social rejection of projects. There has been a lot of discussion today around things like blackouts and brownouts, and those have been tied to social acceptance and conflicts around projects that need to be built. If we bring in communities, engage with them and allow them to have revenue and benefits to their communities, social acceptance tends to go up for projects.

In terms of resource balance, there have been studies done for quite a long time that show that, if we really encourage public transportation, active transportation, different options at decarbonizing transportation without entirely relying on personal vehicles at least in cities, that can go a very long way to balance resources and reduce the need for build-out of electrification. It can also support affordability of transportation for many communities and support active lifestyles.

Thank you.

Dr. Heather Exner-Pirot: Thank you, Ms. Lapointe, for the question. That's a very thoughtful question. We should all be thinking, every day, about how to find this balance.

For me, I think I'm a median Canadian voter. I care about climate change but I also care about affordability. The Canadian public is extremely sensitive to price changes in energy costs. We've seen that in the polling and we've seen that with the carbon tax. We saw it in Europe. There are often political consequences when energy costs go up, so there's a high incentive to keep energy affordable.

How do we get out of this trilemma? I think technology is what has to fix this. People in most parts of the world, unless they are wealthy, will simply not pay more for energy. In many cases, they cannot afford to pay more for energy. That's why I'm quite hopeful that we can get carbon capture costs lower, especially nuclear. I think nuclear has a tremendous runway to get cheaper. If you like energy security, nuclear is great for electricity, but it can also provide industrial heat. That's something that most renewables would have a very hard time doing.

Again, I think there's a role for the federal government to invest in research and development and first-of-a-kinds and new technologies. We actually have a paper with the Transition Accelerator looking at a framework for smart ways of incentivizing this at a federal level and a policy level. That's coming out in the next couple of weeks.

These are great questions. I just want to end by saying that the Canadian public is extremely sensitive to energy price increases. If it isn't affordable to begin with, you won't get very far with your sustainability policies.

● (1225)

Ms. Viviane Lapointe: Thank you.

Mr. MacDougall and Mr. Kabbara, would you like to weigh in as well?

Mr. Moe Kabbara: I'll just echo what Dr. Exner-Pirot said. I think for us, it has really been the prioritization of different projects and infrastructure projects and looking at how to make sure the infrastructure unlocks the benefits. It's really thinking of it as an investment.

As I mentioned in my remarks earlier, affordability is key for making sure that households can continue to support the transition and not necessarily feel negatively impacted, but it's not the same across the board. Some provinces will need more support, and those infrastructure investments will be more critical.

The Chair: Thank you.

We will now go to Mr. McLean for five minutes.

Mr. Greg McLean (Calgary Centre, CPC): Thank you, Mr. Chair, and thank you, colleagues.

My first question will go to you, Mr. Dion. Your organization, the Canadian Climate Institute, was founded in 2020. Since then, it's been gifted $34 million, up to April of 2023, by this government.

Can you tell me what you're accomplishing that is nothing but an overlap with Environment and Climate Change Canada?

Mr. Jason Dion: We do a lot of research for all aspects of the climate change challenge, from adaptation to mitigation to clean growth. We provide policy advice, independent advice, to governments on what their options are—how to make them cost-effective, and effective, in terms of reducing emissions, but also affordable and viable.

We have a lot of research that we do—

Mr. Greg McLean: Okay. Thank you. I appreciate that.

I've heard your testimony here. I do find it somewhat biased. I'm wondering if, in that respect, you're little more than a third party propagandist funded by this government.

Mr. Jason Dion: I wouldn't agree with that assertion. I'm an independent researcher. Our work is independent. Our board is independent. We answer the questions and speak to the priorities that we think are important for Canadians—

Mr. Greg McLean: I've looked at your board. Your board is the same people who have been funded by this government through various entities. An extra $34 million is going to your entity here.

As I say, I've listened to your data. Some of your data is correct, although it is partial, if I may say that. If you're not looking at this total solution, you are actually presenting Canadians with what I would call “moral hazard”, where they are literally going to freeze in the dark.

Would you agree?

Mr. Jason Dion: Not at all. I do not believe in an energy transition that leaves people with less means and less ability to afford to feed themselves and to have the energy that they need to rely on. We are very focused on how to oversee and shepherd a transition that can work for Canadians.

Mr. Greg McLean: Okay. Thank you.

If this $34 million wasn't spent by this government, would Canadians be any further from a solution than they are today?

Mr. Jason Dion: I'm not sure I understand your question.

Mr. Greg McLean: Okay. I'll move on.

My next question is for Mr. MacDougall of the Pembina Institute.

Mr. MacDougall, the Pembina Institute is an organization that was funded, of course, with good intention, as a charity, again. In the same period of time that I referenced for the Canadian Climate Institute—as a matter of fact, since this government came to power in November 2015—it's been gifted almost $9 million by this government, whereas previously it wasn't.

Are you aware of that?

Mr. Scott MacDougall: No, I'm sorry. I'm not.

Mr. Greg McLean: This government's funded $9 million to your organization. Previously, it was funded almost nothing. Again, it was for all kinds of research that has led almost nowhere to this point in time, but here we are with your insightful input.

Let me go through some things here. Marlo Raynolds ran for the Liberal Party of Canada in 2015 and lost in Alberta, and was subsequently hired as the chief of staff to the Department of the Environment. The clean energy regulations that we're looking at here today are Mr. Raynolds' baby. Since his departure, they've been adjusted three times by the Department of the Environment in order to become more realistic.

They are a dream, they're a fantasy, and they're not going to work.

However, let's go through the data here. January 11, the load record in Alberta was 12,384 megawatts and 1,111 of that was provided by wind. On January 13, when the load was no longer there, what happened was wind was no longer available. Alberta ended up in almost an electricity shortage. You're trying to tell me, with your data points you've given me here today, that 12,384 megawatts is going to be completely provided by wind and solar? At what point in the future?

● (1230)

Mr. Scott MacDougall: I haven't indicated that I had a timeline for when it would be matched with 100%. Our modelling with the University of Alberta found about 58% could be achievable by 2035.

Mr. Greg McLean: There are some mathematicians who actually follow us here. At that point in time, on January 13, 0% was provided by wind and solar. Zero per cent to the power of four is still 0%. Zero per cent was wind and solar.

Again, to the moral hazard question, in the regulations that you're trying to buy into here, are you telling Albertans that they will literally have to freeze in the dark in an episode like what happened on January 13?

Mr. Scott MacDougall: I'm trying to think if it was the Market Surveillance Administrator or the AESO in Alberta.... When they looked into those incidents—and also when Powerex, B.C.'s neighbour, looked into those incidents—they found layers of causes of those blackouts.

One of the layers was the very high peak demand, which you pointed out. Another layer was a number of unexpected gas-fired generation outages. Another layer, as you point out, was around wind having very low output on those days, as well as solar, of course. It was nighttime when those incidents happened.

They were forecast to have low output, but they were a bit below that. Since then, one of the findings by AESO was that they need to change the way they forecast wind and solar. That's been one positive change.

Thank you.

The Chair: Thank you.

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

The floor is yours.

[*Translation*]

Mr. Mario Simard: Thank you.

Let me reassure our witnesses. I like my colleague very much, but I do not think that we are going to die in a nuclear winter any time soon. Nor do I believe that nurses or teachers are leaving hospitals or schools because there is no heating, as Mr. Poilievre says. I think that the energy question deserves to be taken more seriously than that nonsense.

I am sure that you probably share the same opinion.

If we want Canada to be more attractive and more competitive when it comes to the energy transition, do you agree that to get there, it will take a carbon pricing mechanism, given what we are experiencing on a global scale?

I would like a short answer from all the witnesses.

[*English*]

Mr. Scott MacDougall: Yes, I do. I think there's a market failure in place around the impacts and the costs of carbon pollution that can be fixed with carbon pricing.

[*Translation*]

Mr. Mario Simard: I have the same question for Mr. Kabbara and Mr. Dion.

[*English*]

Mr. Moe Kabbara: I think we want to make sure that Canada's framework remains competitive, especially on the industrial side of things.

We don't necessarily have an organizational position on pricing, but for us, really, it's a matter of economic competitiveness and ensuring that we're aligned with other nations that we're competing with economically.

Mr. Jason Dion: Yes, carbon pricing is a powerful tool. Our research has shown that the large-emitter trading systems, the industrial carbon pricing systems in Canada, will disproportionately drive Canada's GHG reductions, and it leverages the power of markets to do so.

Is it the only tool we have in front of us? No, there are other ways to do it, and there are smart ways to implement them and combine them, but certainly we need to think about the economic impacts. Economic research has consistently shown carbon pricing can be a good way to do that.

● (1235)

[*Translation*]

Mr. Mario Simard: Thank you.

I would like to ask the same question to our other two witnesses. I would ask them to provide a brief answer.

[*English*]

Dr. Heather Exner-Pirot: Yes, I support and Macdonald-Laurier Institute supports industrial carbon pricing as the most efficient mechanism by which to address climate change.

Dr. Christina Hoicka: Carbon pricing is a very useful tool. However, whether or not we have carbon pricing, we will need a very wide mix of policies in order to get to where we're going, because one policy cannot do all things. We need to be very careful when we select the policy mix and mixes that we choose, and of course, they're going to be different depending on the province. Carbon pricing can absolutely align with facilitating that as one important part of the policy mix.

The Chair: Thank you.

I'm going to go to Mr. Schiefke for five minutes, and then Mr. Angus after that.

Go ahead, Mr. Schiefke.

Mr. Peter Schiefke: Thank you very much, Chair. I appreciate the opportunity.

First, I'll start off by apologizing to the witness who was referred to as a propaganda tool by my Conservative colleague across the aisle. I don't think that's the kind of language we should be using in this committee, but it goes in line with what we've heard from many Conservative members, including the leader of the Conservative Party, using insults, using fear and talking about a nuclear winter in making the transition to a greener economy.

I guess I'll use my line of questioning to debunk some of those myths and those arguments put forward by my Conservative colleagues. I'll start off with this one, and this I will ask Dr. Exner-Pirot and Ms. Hoicka, as well as Mr. Dion and Mr. MacDougall.

If we make this transition to a cleaner electrical grid, to cleaner forms of energy, are we going to experience a nuclear winter? Are we going to run out of electricity? Is everything going to collapse?

I'll start off with you, Dr. Exner-Pirot.

Dr. Heather Exner-Pirot: It's all a matter of the trade-offs and the costs of the benefit. Perhaps it's possible to reach a 100% clean electricity grid, but it would be extremely expensive to do so, and you'd certainly have more intermittency and less reliability if you did so.

While we all want net zero by 2050, I think there are many cheaper ways to do it than the last couple of percentage points on what is already a very clean electricity grid. Focusing on getting to 100%, when 92% or 93% might allow us to have and maintain the reliability and the affordability and sustainably is what I object to.

Mr. Peter Schiefke: Dr. Hoicka.

Dr. Christina Hoicka: Let's talk about affordability. My insurance costs have gone up to almost double, because of climate change. Let's talk about the costs of adaptation to climate change, including the costs to the grid. The year that I moved to Vancouver Island, there was a heat dome, and one of the main power lines went down, because it was overheated. That was one of the main transmission lines to the island.

The costs of heat domes, wildfires and many other climate change impacts are getting larger and larger and impacting the electricity grid, and those costs are going back to consumers.

If we want to talk about affordability, we need to talk about adaptation of the grid. Regardless of whether we are using renewable electricity or other types of electricity, we are still going to have blackouts and brownouts and electrical infrastructure that's impacted by those costs due to climate change. We need to mitigate climate change.

We also know that if we start to think locally and regionally with electricity transition, I think that we can manage it so that we can adapt to climate change and we can also have affordable, reliable electricity. Part of that affordability can be by having revenues go back to the communities that are helping shape that, including the jobs that can also go back to the communities.

Thank you very much.

Mr. Peter Schiefke: Thank you, Dr. Hoicka. I appreciate very much your sharing your personal experience. I experienced something very similar three times in the last nine years in my own riding, with two record floods, as well as a rainstorm that dropped 156 millimetres in a 24-hour period, causing over 10,000 members of my own community to have their basements flooded. Every single one of us, me included, has seen our insurance rates go up.

Mr. MacDougall, followed by Mr. Dion, can we expect a nuclear winter if we make this transition to a green electricity grid and green energy sources?

● (1240)

Mr. Scott MacDougall: I think...probably not. In sifting through that a bit and in looking at some of the cost and reliability arguments around this, I think we're seeing, in a number of grids around the world, fairly quickly rising amounts of wind and solar on grids. That is, I think, a good demonstration that it can be done reliably. In our jurisdiction scan—I don't have the numbers at my fingertips right now—I think cost numbers are manageable within those jurisdictions as well.

Mr. Jason Dion: I think that what we're often seeing, in a lot of the discussion, planning and policy-making around this transition, is that there is a direct interest in making sure that this proceeds at a pace and with enough balance that people aren't adversely affected. We need to look at tools that can redistribute costs and affordability outcomes as well as to adopt a balanced approach that can avoid any especially challenging impacts of the energy transition.

Again, just to agree with Dr. Hoicka, I emphasize that climate change is already costing Canadians $700 a year per capita, according to our research, so this is something we can't avoid and a contribution to the solution is imperative.

The Chair: Thank you.

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

Mr. Charlie Angus: Thank you, Chair.

There seems to be some confusion among some of our witnesses as to whether battery and wind is cheaper than natural gas. Certainly, the Clean Energy Canada report of 2023 did an excellent analysis for Ontario.... It said that wind and solar—with battery backup, which is, of course, necessary—was much cheaper than natural gas, yet Doug Ford opted for natural gas.

Professor Hoicka, you talk about the clean energy transition being interfered with by what you call “carbon lock-in”. You write, “Our policies, infrastructures, technologies and behaviours all reinforce continued fossil fuel use and inhibit the uptake of decarbonizing technologies.” What do you mean by that?

Dr. Christina Hoicka: I was talking about policy mixes earlier. We have a lot of policies that are supporting our use of fossil fuels, and those policies need to be removed. We are missing a lot of policies—which I wrote about in my briefing note—that would help us to transition to renewable electricity. We need to remove the policies that are supporting fossil fuel use, add in policies that would help us transition to renewable electricity and, if those policies reinforce justice and resilience, we will transition more quickly.

Mr. Charlie Angus: Thank you.

I was in Dublin last week at the European security council, and we talked about the climate change issue. It was amazing: Not a single European was knocking on our door to ask for LNG, despite all of the advertising that we see from the oil and gas lobby. They've set some very ambitious targets. It was embarrassing to be Canada, because they don't have any of the advantages that we have.

Professor, do you think that, because of the high power of the petrostate in Canada and of the oil and gas lobby, we are deliberately ragging the puck while our European competitors are locking into clean technologies that are going to put them at a much greater advantage over us?

Dr. Christina Hoicka: One concern that I raised in my briefing note—and I read about this in a forthcoming report—is the fact that many of the renewable electricity procurement policies were stalled between, about, 2015 and 2019. Prior to those times, those policies were actually very successful. The renewable electricity co-operative sector is in attrition right now. I think we are not giving enough attention—

Mr. Charlie Angus: I'm sorry, but can I just...? Are you saying that, during Mike Harris's reign, there was actually greater uptake than during Justin Trudeau's first four years? Can you just clarify that for me?

Dr. Christina Hoicka: It was not Mike Harris. Many—

Mr. Charlie Angus: I meant Stephen Harper; they're all the same, to my mind.

The Chair: Ms. Hoicka, can you just wrap up? We are out of time.

● (1245)

Dr. Christina Hoicka: There was uptake between 2010 and 2015 to 2019 of these policies that were mainly provincially based, although there were supports federally.

The Chair: Thank you.

We now go to Mr. McLean for five minutes. Go ahead, sir.

Mr. Greg McLean: Thank you very much.

My question this time is for Mr. Kabbara.

One thing I liked in your submission here, when you spoke to us, was that these electricity solutions are not consistent across the country. I agree with you.

Electricity in parts of this country is provided by hydro, by nuclear and sometimes by natural gas, which has allowed us to wean off of coal and bring down emissions in Canada significantly, primarily in one or two provinces out west.

I agree with you. You said the grid is going to have to grow by 2.3 times by 2050. Two to three times is what we're going to have to grow. It's a doubling, plus. You're saying that's going to be accomplished with 3% growth, yet the electricity grid has grown that much already. Therefore, it's going to have to continue to grow to meet the growing demand from the increasing use of power in our economy.

Now, power in our economy is roughly one-third electricity, one-third motive power and one-third natural gas for industrial means. You're going to say that we have to get rid of the two-thirds that are hydrocarbon-based and build up the other one by 3% a year in order to get to two to three times.

I think we're going to have to get significantly higher.

Can you comment, please, on how the parasitic cannibalization of the other forms of energy are going to require the electricity grid to grow even further than it has?

Mr. Moe Kabbara: When we look at the last 20 to 30 years, we haven't seen that much growth in electricity. This has been an era of a flat load, basically. It's been around 0.7%.

I was referring earlier to 7% growth between 1920 and 1960.

I want to also highlight a critical point here, which is that when we say doubling or tripling, around 40% of the energy mix in Canada is still going to come from sources of energy other than electricity. Even in the most ambitious modelling, you see electricity between 40% to 60% of the energy use. That means there's still 40% coming from other things. That includes biofuel, hydrogen—

Mr. Greg McLean: What would that be? Where would that 40% come from?

Mr. Moe Kabbara: It would come from biofuels, hydrogen and fossil fuel with abatement—with carbon capture. Even in the most ambitious climate modelling, we're not going to see electricity be 100%.

Mr. Greg McLean: There is going to be no extra electricity required to make the hydrogen, the biofuels and all of these other things. It's going to be, again, parasitic on the electricity supply load.

Mr. Moe Kabbara: There will definitely be electricity needed as input and that's kind of reflective of that 60%.

Our position in our organization is that we really need to look at options that reduce that reliance on electricity, including blue hydrogen, for example, which is a way to upgrade natural gas to become a net-zero fuel and sequester the carbon. That is a way to ensure that we're not necessarily relying purely on electricity.

Mr. Greg McLean: Thank you.

You said these hurdles are not fatalistic. Getting the western provinces off of natural gas and provide for heat and power for their citizens in -40°C degree weather by 2035.... Would that be fatalistic?

Mr. Moe Kabbara: Our position is that a net-zero grid is something that we need to work toward as part of our net-zero 2050 targets. As mentioned earlier, the current regs that are being discussed in the context of electricity don't necessarily call for net zero by 2035.

We've been working very closely with the industry to ensure that utilities are empowered to do planning that ensures reliability in the context of these regulations. Our position is that, as mentioned, different provinces are starting from different starting points and the policy needs to be considered as—

Mr. Greg McLean: Thank you.

I'm going to move back to Mr. MacDougall.

You talked about Ontario. Ontario has a prospective $10-billion deficit this year provincially. Of that, $7.3 billion is a subsidy for power production for Ontario Power Generation. A $7.3-billion deficit counts as about $2,000 per household in Ontario that they don't see on their hydro bills.

Alberta is the only province where you have a transparent bill that actually shows you what the cost of hydro is.

If Ontarians had an extra $2,000 put onto their hydro bills per year, do you think you would see a little more appreciation for the cost of power across the country?

Mr. Scott MacDougall: That would be very impactful to people's bills, for sure. I think people would feel that.

I'm not sure what it would trigger in terms of realizations about the bigger picture of the power system.

● (1250)

Mr. Greg McLean: Can I go further here?

The Chair: You're at time. You have three seconds.

Thank you.

We'll now go to Ms. Dabrusin for five minutes.

Ms. Julie Dabrusin: Thank you, Mr. Chair.

I found this whole conversation with the witnesses very interesting today. It's been very enlightening and helpful. I really appreciate the time they have given us.

I was particularly interested, though, because I heard Mr. Dreeshen talk again, as he has several times over the past, about the cost of decommissioning wind turbines and having to factor that in. Somehow the feeling is that there is no cost to decommissioning oil wells, which we, in fact, know isn't correct.

I have put this on notice, and I would like to move:

> Given that:
>
> There are 1,600 abandoned and orphaned oil wells in Alberta polluting farmland, waterways, and air;
>
> The number of abandoned wells in Alberta are set to increase by an additional 1,800 to 2,000;
>
> These additional abandoned wells will cost more than $200 million to clean up;
>
> The Government of Alberta sent back $137 million because they failed to use the funds provided by the Government of Canada to clean up abandoned wells and create jobs in the pandemic;
>
> The Government of Saskatchewan used their allocated funds in their entirety to clean abandoned wells and create jobs;
>
> Companies who abandon wells and fail to pay for their cleanup negatively impact provincial taxpayers and municipalities;
>
> Orphaned and abandoned wells present an economic opportunity to support energy solutions like geothermal energy.
>
> The Standing Committee of Natural Resources begin a five-meeting study on the impact of this failure to clean these wells in Alberta, the impacts of the pollution from not cleaning up abandoned and orphaned wells, the costs of cleaning up abandoned and orphaned wells, the regulations to hold companies to account for well cleanup, and the potential opportunities associated with cleaning up abandoned wells, and report its findings to the House of Commons.

The Chair: Thank you, Ms. Dabrusin.

We have a motion on the floor.

I'll go to the next speaker, who is Mr. Angus.

Go ahead, Mr. Angus.

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

We have a motion on the table.

Mr. Mario Simard: Perhaps we can let the witnesses go.

Mr. Charlie Angus: Can we let the witnesses leave, and we'll just finish this off?

The Chair: I think that's prudent.

Yes, I see consent.

Thank you to the witnesses for joining us today. You can submit a brief to the clerk if there are any questions you missed or if you would like to provide some additional information. Thank you so much.

We have a motion on the floor. The witnesses are released. I'll go back to the motion.

Mr. Angus, you're next on the speaking order.

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

I come from a mine-ravaged region where the damages that were done in terms of water, the damages that were done to the landscape and to human bodies, necessitated major changes. If you want to mine in Ontario, you have to have a plan to clean it up, and it's worked very well. It also has made sure that our mining industries remain very strong.

I'm always shocked that the oil industry in Alberta has been given a free pass to pollute. We see the horrific pollution in Fort Chip and the cancers there, the failure to address the huge ecological damage that's been done by abandoned wells and the fact that the federal government is supposed to pick up the tab. Ordinary citizens are being asked to pick up the tab for an industry that made $38 billion in profit in a single year and won't lift a finger to deal with these abandoned disaster zones. I think it's really important that we investigate this.

We know that money was given to the oil industry for cleanup. We've had a very questionable record of whether or not that money was spent properly. We need to have accountability. We need to have accountability from companies that are continuing to ask Canadians to bear the burden.

This summer Jasper burnt—one of our most iconic communities—what did we hear from Rich Kruger? It was that the sun was shining. Well, the sun wasn't shining on people in Jasper. The sun's not shining on people in North Carolina. The sun is shining on an industry that relies on the ability to pollute our planet and not pay, that relies on taxpayers to continually fund them when they're making record profits and they're not putting back. We have this disgrace of abandoned wells that have to be cleaned up. Once again, they're coming to the Canadian taxpayer, asking us to clean up the mess for an industry that has made staggering amounts of profit over the years.

It doesn't cut it to say, well, these are companies that no longer exist, and we don't know who they are. These are orphaned wells. That was an old tactic used by the mining industry for years. Junior mining companies or companies that were no longer profitable were getting sold off to a front company, and then the original owners of the property were walking away. However, that's no longer allowed and hasn't been allowed for decades, because we put serious rules in place to make sure that, if you are going to operate and exploit natural resources, particularly on public lands, you're going to put money into a trust to deal with that.

Unfortunately, we see that in the province of Alberta, the Alberta Energy Regulator is basically an extension of CAPP. They have been given...and able to get away with staggering levels of corporate malfeasance. Again, look at the leakage that came out of the tar sands tailings ponds that was covered up and they were not accountable for. People have gotten sick.

Certainly I would like to see someone like maybe Chief Allan Adam from Fort Chipewyan participate and give his perspective. I know it's beyond the issue of poisoned wells, but it's the issue of poisoned land.

We certainly support this. We think this is a very important study. You can count on the New Democrats to back up this motion.

Thank you.

● (1255)

The Chair: Thank you, Mr. Angus.

I'll now go to Mr. Falk.

Mr. Falk, you have the floor.

Mr. Ted Falk: Thank you, Mr. Chair.

Yes, I'm really intrigued that we would have a motion at this point in the committee work, in the committee business, that we've been doing. We're in the middle of an electrical grid study. We're in the middle of a TMX study. We have a heavy workload that's incomplete, and we keep bouncing around between both of these studies. It would be nice, actually, if this committee were seized with the work that we thought was important some time ago.

We heard from witnesses today who seem to think that we have some very important issues that need to be resolved here. They contributed here, and I appreciate all of their testimony. I don't agree with all of it, but certainly I appreciate the fact that they're willing to tender their opinions here at committee and open themselves up to questions. I think it's terrific that they're doing that.

However, we're in the middle of very important studies. The Trans Mountain expansion pipeline study is something that we are trying to get to the bottom of. What exactly went so horribly wrong there with this Liberal government that they took a project that should have cost $12 billion and ended up at $34 billion?

Mr. Chair, I don't think we've seen the end. We don't have final numbers on that project yet. Now they're suggesting that they're going to put it up for sale, but nobody seems to know what that price is.

I think it is really incumbent on this committee not to get distracted with additional studies at this point, but to finish the work that we've started here. That work is looking at the TMX expansion project to see what went wrong there, why the cost is what it is and how horribly mismanaged it has been by this Liberal government. It is also finishing this electrical study that we've embarked on. I think these are two very important studies, and I would really like to see us continuing with them.

Thank you, Mr. Chair.

The Chair: Thank you, Mr. Falk.

I'm going to go to you, Mr. McLean, but this was our last meeting for this study for today, just to let all members know. I have some comments at the end of the meeting regarding drafting instructions.

I'll go to you, Mr. McLean.

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

It's been a while since I've been on this committee. My colleague, Ms. Dabrusin, is presenting this, and I've worked with her behind the scenes in the past to try to get her more information on the oil and gas industry. However, the data points are all off. I would request that she get more information on this data because these data points are distinctly different from the reality we're facing in Alberta.

This is a problem. You must recognize that, during COVID, the federal government intervened in order to keep people working in the oil and gas service industry, when everything in Canada shut down and people were given CERB and CEWS in order to kind of keep moving along.

In Alberta, with the oil and gas services industry, it decided to keep people moving, working and getting paid who were taking care of an environmental problem that had existed for too long a period of time. It was a good employment intervention from the federal government, and most Albertans are very thankful for that intervention and the amount it added to keeping people employed—not on some kind of CEWS but actually doing good things for the economy.

The lapse in that.... I'll speak about the Indian Resource Council here as well, because they came and they were prodding the government. They pushed and pushed to try to get the remainder of the funding, which they were being left high and dry with here, post the date, because spending a billion dollars all at once is not an easy thing to do, Mr. Chair, as I'm sure you can realize. They were trying to get that extended to make sure that indigenous workers in the oil field service environmental remediation industry were allowed that extra time to spend this money.

The answer from this government was, no, it would not spend this money. The fault lies as much in logistics and the political will of this government to extend it as it does in anything else, including with respect to our indigenous entrepreneurs.

I will say, however, as a final note—and you'll appreciate this, Mr. Chair, because you're also from Alberta—that the oil and gas industry is heavily regulated by the province. The oil and gas remediation, the orphan well program, is administered by the province. It is provincial jurisdiction. Once again, we're looking into a study here in which a committee of the House tries to step in and tell the provinces how to regulate an industry that they're doing their best to regulate strongly right now.

I will point out that Canada has amongst the most regulated industries of all the oil and gas industries in the world, because it's very environmentally friendly. Yes, it matters in this country because—and I'll tell my friend Mr. Angus—this is one of the only industries left paying taxes to fund hospitals, schools, our social welfare and the myriad of social programs put on the table by the Liberal government. If we don't have the oil and gas industry paying taxes, we will have monumental deficits, beyond the $50 billion in monumental deficits we already have.

I hope that's enough information for my colleagues to reconsider the folly of this motion. We need to move on to study things the House can actually have an impact on, and not those where it's going to pretend to tell other jurisdictions how they should do their jobs.

● (1300)

The Chair: Thank you, Mr. McLean.

We have more speakers, and I know we're at time.

Mr. Simard, you are next. If we think we are going to be short today.... Otherwise, we can go to a vote. If we think we have a lengthy number of speakers, then we'll have to reconsider.

I want to give it to you, Mr. Simard, and depending on how quick you are—

[*Translation*]

Mr. Mario Simard: Unfortunately I have a commitment after the committee meeting.

If everyone agrees, we could resume our discussion at the next meeting. Everyone could speak to the issue and we could have a vote then.

[*English*]

The Chair: Okay, it looks like we have a—

Mr. Angus, do you have a point of order?

Mr. Charlie Angus: I was wondering. I think we have representatives from Synovus and the other companies coming on Wednesday. I think it would be better to hear from them and then put off committee business to the next moment.

The Chair: It looks like there's agreement amongst everybody on that, so we can end today. Before we end today, though, I will say that we will proceed with our next meeting, and maybe we can pick this up at the meeting following that one. It looks like that's what everybody is stating here.

This concludes the testimony for this study today. Members, please submit your suggested drafting instructions and recommendations for the report to the clerk no later than Friday, October 11, 2024, at 4 p.m. I hope that's clear.

Also, note that, following the discussion of last Wednesday, October 2, in relation to the Trans Mountain pipeline expansion, Western Indigenous Pipeline Group, Natural Law and Iron Coalition were invited to appear, but we have not yet received answers. However, the Tsleil-Waututh Nation has been confirmed for Wednesday.

Thank you, everyone. That concludes our meeting for today. Have a great day. The meeting is adjourned.