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## **Standing Committee on Natural Resources**

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**EVIDENCE**

**Thursday, April 18, 2013**

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**Chair**

**Mr. Leon Benoit**



## Standing Committee on Natural Resources

Thursday, April 18, 2013

• (1530)

[English]

**The Chair (Mr. Leon Benoit (Vegreville—Wainwright, CPC)):** Good afternoon, everyone.

As the committee members and, I'm sure, the departmental officials know, we're starting a new study today. Before I turn to our first group of witnesses—the departmental officials—I just want to explain very briefly what our study is about.

We'll be dealing with market diversification in the energy sector. The committee, through discussions, decided to do that in three sections: export market diversification, product diversification, and diversification of energy supply sources. I'll give a brief explanation of what we're talking about.

Under the first section, we'll be looking at export market diversification: basically ensuring that Canadian energy products are exported to more than one country. We've seen the difficulties that have become apparent from depending on the United States, for example, as virtually the only export market for our oil. We've seen the depression in prices because of that, whereas if we had other markets, clearly we wouldn't be subject to the discount we're getting—certainly for Canadian bitumen and oil.

Product diversification refers to the promotion of a wide range of Canadian energy commodities. This used to be mostly commodities, but now of course this also includes expertise and energy technologies, both domestically and internationally. This may include diversifying Canada's oil portfolio by adding value to raw products by upgrading and refining, as well as other things that I'm sure will come out through the study.

It may also include enhancing export opportunities for Canada's renewable energy. We've had a lot of discussion at previous committee meetings on renewable energy, clean technology, and energy expertise. Again, we're not just looking at exporting commodities any more; it's the expertise and the innovation around that as well.

The third area we'll look at is diversification of energy supply sources. Diversification of energy supply sources refers to the extension of domestic markets, which can help lower energy costs to industry and consumers. In Canada, diversification of electricity markets and increased movement of crude oil from west to east can help expand domestic energy markets and strengthen overall interprovincial trade.

That's just a bit of background on the topic we're discussing. Now I want to get directly to the witnesses from the department....

Yes, Mr. Julian.

**Mr. Peter Julian (Burnaby—New Westminster, NDP):** Sorry, Mr. Chair. I just thought it would be appropriate for us to welcome our new member.

**The Chair:** Yes. I guess Mr. Garneau isn't officially part of the committee yet, in terms of paperwork and stuff, but that is a very good point, Mr. Julian, and I thank you for that.

Mr. Garneau, welcome to our committee. We're very much looking forward to having you as a member of the committee. I'm sure you will add a lot of value to the committee. We're looking forward to that. It's good to see you here.

We have a number of witnesses today.

First, from the Department of Natural Resources, we have Jeff Labonté, director general, petroleum resources branch, the energy sector. Welcome.

Jonathan Will is director general of the electricity resource branch, energy sector. Welcome.

John Foran is director of the oil and gas policy and regulatory affairs division, petroleum resources branch, energy sector. Welcome to you.

And Dave McCauley is director, uranium and radioactive waste division, electricity resources branch of the energy sector. You've been before our committee previously, on other topics, as have some of the others.

From the Department of Foreign Affairs and International Trade, we have Carolyn Knobel, director of the multi-industry sector and virtual practices division, global business opportunities bureau. That's quite a handle.

As you guys can see, we have a really wide range of responsibilities represented by the officials today. That's the type of topic we have.

I'm very much looking forward to the presentation by the departmental officials, and then we'll get to questions and comments.

Would you please go ahead with the presentation, Mr. Labonté.

• (1535)

**Mr. Jeff Labonté (Director General, Petroleum Resources Branch, Energy Sector, Department of Natural Resources):** Thank you very much, everybody.

[Translation]

Ladies and gentlemen, thank you for inviting me to appear before the committee this afternoon.

[English]

It's a pleasure to be here. We're delighted that we could be among the first speakers for your new study on this particular subject, which is extremely important to Canada.

We've circulated a presentation that has a lot of information in it. We felt that providing it would be helpful as you start the study. I don't intend to speak to every single slide, but I'll focus on several key ones and try to stay within the timeframe. We can then make ourselves available for your questions.

I'll start with slide 1. We really wanted to outline the importance of energy market diversification to Canada. It's without a doubt a significant, if not the most significant, part of the economy that's under way today. It's certainly one that's growing and continues to grow.

[Translation]

What's more, Canada is a global energy leader. In comparison with other countries, worldwide, we have tremendous resources.

[English]

Certainly, when you look at the list, you see it: we're third in natural gas, fifth in oil, third in hydroelectric power, second in uranium, including with our domestic nuclear technology in CANDU. With 75% of our electricity generation being non-emitting, Canada's energy assets and energy context are extraordinary by any standard, so much so that in many international fora the conversation on energy security for Canadians is one that seems almost to be a non-question. We speak to the market-based principles and to the issues of energy from the vantage point of being extremely blessed, which is not something that is shared around the world.

In slide 4, we can see that those energy assets and Canada's energy activities are of significant benefit to Canada's economy. We're looking at close to 10% of the gross domestic product, over 300,000 direct jobs, and a significant number of spinoff jobs. Those jobs are spread throughout the country. Alberta, which is not on the list, has 136,000, and there are 60,000 in Ontario, 33,000 in Quebec, and 22,000 in B.C. The numbers are quite significant and impressive.

It's also an important part of Canada's merchandise trade, with \$120 billion in exports, or 27% of it. Those numbers relate to the price of commodities as well as the volumes of energy that are produced and traded. At the same time, the activities in energy bring in significant payments to governments. Over the last five years, those have averaged about \$25 billion.

Those benefits are across the country. Those jobs continue to grow, as does that economic growth. It's forecast that natural resources projects represent about \$650 billion worth of investment over the next decade, or well over 100 projects in energy. If we take the oil sands alone, the Canadian Energy Research Institute projects over the next 25 years an average of 630,000 total jobs, indirect, direct, and induced. These are fairly significant numbers.

At the same time, global energy demand, as indicated on slide 6, continues to grow. According to the International Energy Agency, global energy demand will increase by 35% by 2035. Those increases will come in natural gas, in renewables, and in oil. At the same time, even in the most optimistic projections looking at the scenarios given the climate implications and emissions profiles, by 2035 oil and gas will continue to consume about 47% of global energy demand.

As I said, Canada is blessed but at the same time is positioned well to diversify and grow in that growing global market. That market is certainly one in which we see both crude oil production and natural gas having tremendous opportunities; however, we will move to slide 8.

• (1540)

[Translation]

Owing to North America's inability to reach world markets, its prices are well below global benchmarks. Here we're talking about crude oil and natural gas. In the energy sector, Canada is facing a growing problem as far as low prices go, and that represents not only a major challenge, but also a decrease in revenue. Those effects extend to governments as well as the private sector, not to mention the country as a whole.

[English]

In slide 9, if we look at diversification as our opportunity to realize growing benefits, we'll see that those benefits, as the chair has pointed out, certainly would be much larger if we were to reach more markets than the current markets we serve. Predominantly we serve the United States for 100% of natural gas, 100% of electricity, and 99% of our oil exports.

In terms of those costs and discounts, however you might call them—people reference them as discounts, as revenues lost, as opportunity cost loss—Canadian energy products are sold at less than global prices. That brings less revenues to the economy, and that brings less growth and less revenues to government, however you slice it. There are different ways of looking at that, and we can certainly talk to those and address questions on that front.

Turning now to slide 10, the push to reach new and diversified markets is one in which infrastructure plays the most critical role. That infrastructure is really looking at market-based responses to reach new markets. Those involve new pipeline proposals, increasing the movement of energy products by rail, increased infrastructure development for electricity, and natural gas exports via liquefied natural gas projects.

Slide 11 is fairly complicated. It outlines all of the different projects that exist in the country with respect to moving crude oil east, west, and south, each trying to reach new markets or to tidewater—tidewater being the ability for an energy producer or an energy customer to load energy products onto a ship to be able to reach markets throughout the world.

There are a number of projects. Looking at the west, there's the Enbridge Northern Gateway project, which is under regulatory review, at 525,000 barrels a day. There's the Trans Mountain expansion, which looks at 590,000 proposed barrels per day. That would be expanded. That project has not yet applied for regulatory review. There is the Enbridge Bakken project in central Canada that would move actually Bakken crude from the United States to Canada's pipeline network, and move that crude then to markets in eastern United States and eastern Canada.

This demonstrates an important facet of our energy infrastructure in North America, that it's integrated across the continent. Energy flows between Canada and the United States in both directions. Although the direction moving from Canada to the United States is of much more significant volume, there are exchanges that occur in all of the energy commodities.

There has recently been the announcement of the TransCanada project moving east, which would propose to convert a natural gas pipeline that exists in the Canadian mainline to crude oil transport. That would involve some new build that would allow that project to reach eastern Canadian markets as far as Saint John, New Brunswick, as well as Montreal and Quebec City.

There is the project of Keystone XL, which I think is well known, well publicized, to reach the United States gulf coast market. The southern portion, of course, has been approved and is proceeding. The northern portion is awaiting regulatory approval from the United States government.

Looking across, there is the additional project from Enbridge called the oil market access project, which would expand an existing pipeline referred to as the Alberta Clipper. That would increase the throughput and volume that would reach the midwest United States, and then would be added to an extension project that would reach the southern gulf market.

There of course is the reversal of the Line 9 projects in Ontario and Quebec, in which Enbridge proposes to move crude from today's east to west, to become west to east. At this point the project has been approved from Sarnia to just outside of Hamilton, to Nanticoke, to serve the Nanticoke refinery. There is an application before the NEB that would see that project get further reversed to reach Montreal. That is under regulatory review by the National Energy Board.

These are the main projects that we speak to when we speak to the market-based responses in which you see efforts under way by different participants to reach east, south, and west.

At the same time, there are substantial projects under way that move crude and energy by rail. Those projects have been increasing at a fairly rapid clip. Rail offers tremendous opportunities and flexibilities for producers in that, often, without building the infrastructure of a fixed nature and using existing infrastructure through rail lines and railcars, smaller volumes and smaller-scale projects can reach markets much more quickly, and have done so at a fairly rapid clip. A total of 180,000 barrels a day of rail transportation of fuel oil and crude occurred in 2012, up 66%. In the United States, that number has been rising even more rapidly, approaching a million barrels a day of movement by rail.

I'll now turn to slide 13.

•(1545)

[*Translation*]

Export terminals are being proposed in order to take advantage of global LNG, or liquefied natural gas, prices. We're looking at the projects. There are five on the west coast of British Columbia and one in Nova Scotia. Another project involves an LNG importing facility in New Brunswick.

[*English*]

These projects are of such a nature that Canada's natural gas resources would be produced and shipped by pipeline to the coast, at which point companies would be developing liquefied natural gas terminals and plants so it would be loaded onto liquefied natural gas tankers and then brought to new markets. To put things into context, the liquefied natural gas price globally hovers between \$10 and \$12 to \$15 in Europe and between \$16 and \$20 in Asia. In Canada, natural gas, the same molecules, sell for about \$3 to \$3.50 but have an immense amount of fixed cost as well. So we will be able to speak to the differential that actually demonstrates that there is an opportunity there to reach new markets and to reach new revenues.

In conclusion, we do have a market-based energy policy, one in which market actors take actions to develop new markets and to move forward through significant investments. The government welcomes investments by foreign companies and countries who wish to be active participants in Canada's energy economy so long as they behave according to market principles. We have investment frameworks which Industry Canada controls to support those. The government certainly supports the efforts of industry to diversify, as long as the projects are applicable and meet all the applicable regulatory and environmental requirements on which the independent regulatory bodies make decisions.

In conclusion, we will continue to be an export-based economy, and certainly energy is a significant part. Our energy production is forecast to continue to grow. Diversification is certainly a means for us to become and continue to be a global player and to attract better revenues and better opportunities for our energy products, and certainly those energy opportunities are tied to infrastructure and the need for us to attract the capital and to continue to do well with our development in a responsible way.

Thank you, Mr. Chair.

**The Chair:** Thank you very much for what I feel was a very good summary to get us kicked off here. I appreciate that very much.

We will go now to questions and comments from members, starting with Ms. Crockatt, for up to seven minutes.

Go ahead, please.

**Ms. Joan Crockatt (Calgary Centre, CPC):** Thank you very much.

Thanks very much for coming, Mr. Labonté, and for that succinct presentation.

As our chair has said, this is the new study on international market access, so I would like to set the stage here by focusing on one of the six aspects you highlighted. That is the rationale for market access. I would like to ask you about public and consumer benefits.

Which provinces in recent years have traditionally been have-not provinces, in that they've generally been receiving equalization from the federal government?

**Mr. Jeff Labonté:** I'm not a finance expert. I think generally speaking the only three that contribute are Newfoundland and Labrador, Alberta, and British Columbia—I mean Saskatchewan.

**Voices:** Oh, oh!

**Mr. Jeff Labonté:** Apologies, Mr. Anderson.

**Ms. Joan Crockatt:** Good. So what would be the commonality among the provinces that are paying into equalization?

**Mr. Jeff Labonté:** I think most economists would say strong resource economies that contribute tremendous wealth to the public purse, if you will.

**Ms. Joan Crockatt:** So they're all energy producers.

So might it be fair to say that fossil fuels, then, are one of the key elements that are keeping our transfer payments funded?

**Mr. Jeff Labonté:** I'm not sure I could make that policy statement, but I think one might be able to draw that conclusion. My view would be that the economy is productive in many different ways, and certainly the resource economy contributes substantial amounts. Those three provinces that you reference as contributing more than others tend to have fairly large resource economy aspects and energy aspects, but large parts of the economies of other provinces contribute as well, so I can't really comment on the complete transfer payment aspect.

**Ms. Joan Crockatt:** You talked about our being blessed and that this was spread right across the country. I wanted to give you a bit of an opportunity to state that.

• (1550)

**Mr. Jeff Labonté:** I'd probably add that energy production and energy activities in one province don't necessarily hold only within that province. So the service sectors, the supporting engineering and financial and investment community, the training and education, and the products that are consumed by those companies that are active in the energy sector are produced all over the country. So whether it's the trucks and buses or the pipe fittings and the metal, whether it's the financing, the insurance business or the engineering services, they tend to be in all the provinces. So that's where we see the benefit accruing, in addition to the payments that go into royalties and revenues and taxes for governments.

**Ms. Joan Crockatt:** Good.

Mr. Oliver talked on Tuesday about the pipeline from west to east, and you also referred to it. I wondered if you could just talk about some of the opportunities for jobs in Quebec, Ontario, and New Brunswick in the refineries, and what those might bring to Canadians in terms of benefits.

**Mr. Jeff Labonté:** Today, the refineries in eastern Canada, whether they're in Ontario, Quebec, New Brunswick, Nova Scotia, or Newfoundland, operate using imported crude. Those refineries

employ Canadians and continue to employ Canadians and are doing reasonably well, but their margins and their efforts are fairly tight given that the global energy price they pay and the markets they work in are fairly competitive.

Certainly, accessing Canadian crude or western crude, or even crude from the northern midwest of the United States, whether it's Bakken or Canadian crude, offers a stable supply of it and also the ability for some of those dollars that transfer between the acquisition of the crude and the seller to remain within the North American context. I think that the more profitable, the more marketable, and the more stable we can make the refinery business, the more likely it is that the jobs will remain in Canada, that we won't see us importing more product, and that we'll see the opportunities there for refineries to continue. There is—

**Ms. Joan Crockatt:** So we could be preserving jobs in Canada by building a pipeline to New Brunswick?

**Mr. Jeff Labonté:** Certainly it would contribute to preserving those jobs, and certainly there is discussion that has been in the media of different refineries looking at the possibility of expanding or considering whether they want to add an upgrading capability to process bitumen or other forms of crude energy products.

**Ms. Joan Crockatt:** Okay.

Could a pipeline from the west to the east actually reduce gas prices for consumers in eastern Canada?

**Mr. Jeff Labonté:** That's a tough one. Certainly, the price of gasoline is a fairly competitive market that works on a kind of continental scale, so you tend to see movement of the cost structure around gasoline and diesel between markets fairly fluidly, given the ability for people to move product using rail, shipping, and barges and different forms. I don't think we're able to say that accessing Canadian crude equals lower gas prices.

**Ms. Joan Crockatt:** Okay. Maybe I can turn that one over to John and ask John for his view of it.

Do you see any other consumer benefits in regard to a west-east pipeline?

**Mr. John Foran (Director, Oil and Gas Policy and Regulatory Affairs Division, Petroleum Resources Branch, Energy Sector, Department of Natural Resources):** We produce the "Fuel Focus" report every two weeks, which looks at the input costs to refineries and at gasoline prices. It's a five-page report and has a lot of data and information.

As my DG has said, the refineries in eastern Canada are paying global-type prices for their crude, for the most part. They're starting to access western Canadian and U.S. Bakken North Dakota crude by rail. Today, for example, we're talking about a Brent price of about \$100 a barrel. Canadian crude is about \$85 a barrel for the same type of identical light crude.

**Ms. Joan Crockatt:** How might that translate down, though? I think we've heard the numbers a lot. What I'm trying to get at is something that the consumer can understand. How might that actually translate to the consumer?

**Mr. Jeff Labonté:** You have a global market, and so with the ability of producers to reach markets and ships and to compete to sell that crude to willing buyers as a globally traded commodity, you're not going to sell it for \$85 to a refinery in—

**Ms. Joan Crockatt:** Are we going to get cheaper gas if we build a pipeline to New Brunswick, do you think? Or no?

It's fine if it's "no", but—

**Mr. Jeff Labonté:** We can't answer the question and say, "Yes, there will be cheaper gas." That's not an answer I can give you. I can tell you that there's a likelihood of less volatility in pricing. In eastern Canada you typically see regulated markets for pricing of gasoline in which the price of gasoline changes on a little more of a weekly scale than a daily scale. Different provinces have different abilities and approaches to changing and regulating gasoline prices.

We would say that it would offer some stability and an opportunity to preserve...but it's too difficult to predict that it would or wouldn't lead to lower gas prices. It's a competitive marketplace. The crude can be sold....

•(1555)

**The Chair:** Thank you.

Thank you, Ms. Crockatt.

We'll go now to Mr. Julian for up to seven minutes.

Go ahead, please.

**Mr. Peter Julian:** Thanks very much, Mr. Chair.

Thanks to our witnesses.

To start, I have a couple of questions to expand on in your presentation. You were talking about \$120 billion in exports. How does that break down?

**Mr. Jeff Labonté:** How does it break down? Sorry, by...?

**Mr. Peter Julian:** Yes, by product, and whether we're talking about raw versus value-added.

**Mr. Jeff Labonté:** If you can hang on a second, I'll just reference.... We are probably going to have to get back to you on the specific details of how it breaks down by gas product versus crude oil versus all the elements, but a fairly hefty portion of it is crude oil exports, it being the largest commodity of the energy that is exported.

**Mr. Peter Julian:** It would be helpful to have those figures and also the destinations. Anecdotally we know that it's primarily the American market, but there are smaller amounts of exports that do go to other markets. So it would be helpful to have both of those figures.

**Mr. Jeff Labonté:** Sure. It is 99% of crude that goes to the United States, 100% of natural gas, and 100% of electricity. So 1% of our crude oil is exported to countries other than the United States.

The petroleum products go predominantly to the United States as well.

**Mr. Peter Julian:** But you'll be able to provide us with more of the details and the actual dollar value?

**Mr. Jeff Labonté:** We will absolutely do so.

**Mr. Peter Julian:** You may not have this either, but I wanted to ask you about it. You have the projections in terms of oil sands production by 2035. Do you also have the projections in terms of the upgrading taking place in Alberta? I admired Peter Lougheed quite a lot as somebody who stood up for upgrading capacity in Alberta. So it would be interesting if you could give us a sense of the extent to which we are looking at upgrading capacity there.

**Mr. Jeff Labonté:** Today about half of the oil sands production is upgraded into synthetic crude, based on 2011 figures. So it's about 860,000 barrels a day. It's projected that by 2020 that will rise to about 1.4 million barrels per day that would be upgraded. Those numbers are based on current proposals that exist within the regulatory frame and on public knowledge that companies have. Of course companies choose to increase or decrease and invest in capital to provide for upgrading depending on market conditions. So for synthetic crude, there is a certain marketplace in North America and that market, in terms of which refineries desire that crude, varies and depends and grows and shapes as investments and infrastructure like refining happen.

So it is projected to grow from about 860,000 to 1.4 million.

**Mr. Peter Julian:** You don't have figures beyond that?

**Mr. Jeff Labonté:** I don't have figures beyond 2035.

**Mr. Peter Julian:** Thank you.

I'd like to talk a little bit about export supports now since we are talking about market diversification. The chair and I previously served on the international trade committee, and one of the huge weaknesses that Canada has—and this has been under the current government and the reason we have the largest trade deficit in our history, tragically under this government—is that there aren't any on-the-ground supports. When I was going on trade missions, I was meeting trade commissioners who would tell me confidentially that they didn't have the budget to buy a cup of coffee for a potential client of a Canadian product or service. That's how bad it is. Yet the main exporting countries around the world, the ones that have succeeded, are those that provide substantial on-the-ground support for their exports. Australia is one example. They spend \$50 for every \$1 that Canada spends on export product promotion.

I'm wondering if you have any sense of what the on-the-ground supports are around the world, or if they even exist at this point, for Canadian energy exports. If we're talking about market diversification, it would be helpful to know what exists already or whether the department or the government has done any analysis about what would need to be put into place for market diversification primarily of value-added products.

•(1600)

**Mr. Jeff Labonté:** Did you mean energy products or value-added products?

**Mr. Peter Julian:** Value-added energy products, I would say. I should tell you I'm a former refinery worker, so I'm a person who actually believes that rather than exporting raw bitumen we should be looking at value-added. That of course is the position of our party as well. So the question is to what extent we have any on-the-ground support or any projections about the kind of supports needed to stimulate value-added exports.

**Mr. Jeff Labonté:** I can answer part of the question, and then I'll close and ask my foreign affairs colleague to join us. NRCan doesn't have any trade-promotion activities. Those activities predominantly fall within foreign affairs and the mission network and the embassies we have.

That said, the department has led a number of missions that relate predominantly to energy and natural resources in which senior officials will work with other countries. My assistant deputy minister is in India right now. In the past year, we have visited Japan, Korea, the Philippines, China, India, the United States, France, and the U.K. So we've been on a number of missions in which we promote energy opportunities, the investment climate of Canada's resource potential, and the energy projects we have. Frequently these countries are of the variety and culture in which a government-to-government contact is the opening to a conversation between the respective private sectors. In other cases the private sector joins the government officials in the conversations. It depends on the nature.

Certainly we do those missions to broadly promote energy diversification and the opportunity for Canada's energy. But we don't have any on-the-ground staff in specific embassies, if you will, who would be buying local people cups of coffee and having that dialogue. That is generally something that the Foreign Affairs network does. Perhaps my colleague Carolyn can add to that.

**Ms. Carolyn Knobel (Director, Multi-Industry Sector and Virtual Practices Division, Global Business Opportunities Bureau, Department of Foreign Affairs and International Trade):** Hi. I guess I can speak to our trade commissioner network abroad and the support we offer this sector as well as others.

As mentioned, we have a series of missions abroad, all of which have trade commissioners, some of whom are identified to be supporting the oil and gas sector and others perhaps infrastructure, which would include energy, etc. They are there to assist Canadian exporters to identify potential buyers or partners for their products and services abroad.

The group that I am resident in has a trade commissioner embedded in the Petroleum Services Association offices in Calgary. He is an identified key individual whose aim is to be expert in supporting Canada's oil and gas sector abroad. Our various trade commissioners who are working in missions in Malaysia, Qatar, or wherever can reach back and have access to this specialist who is linked with industry directly and who will assist them in their work. Apparently 44-odd missions within our network have identified the oil and gas sector as a priority for their various markets, so those ones would be most proactively working in support of that sector.

We do have, as you've alluded to, financial mechanisms. A program that the Department of Foreign Affairs has internally is our integrated trade support fund. Posts can access that fund to assist them in running events in their markets.

To use an example of a country, let's say in Malaysia they want to run a seminar highlighting Canadian expertise in the oil and gas sector. They perhaps could draw upon that fund for room rentals, etc.

**The Chair:** Mr. Julian, you're out of time. I was just letting the witness give an answer of some kind, but your time is long done.

Mr. Gameau, again welcome. You have up to seven minutes.

**Mr. Marc Gameau (Westmount—Ville-Marie, Lib.):** Thank you very much.

I'm the new kid on the block here, so I have some very basic questions to ask. I'll start with this one.

I was reading recently one of I guess a spate of articles a few months ago that talked about how the United States was sort of undertaking what appeared to be a massive effort at self-sufficiency. It was calling into question whether or not there would be future export markets from Canada in the years to come. I just wanted to get your take on it.

You mentioned this briefly in your presentation, but I'd like to get more of a sense of it from you. How aggressively is the United States trying to diminish its dependency on Canadian hydrocarbons? What kind of timeframe are we talking about here? Is this something that Canada should be genuinely concerned about?

•(1605)

**Mr. Jeff Labonté:** That is a very good question.

The report from the International Energy Agency was what I referenced. It made a fair bit of headlines in the fall of 2012 when it suggested that the U.S. would be energy self-sufficient by I think 2035.

Its projection was based on an overall system of energy that looked at coal, wood pellets, renewables, crude oil, hydroelectricity, and natural gas so that overall, net, the United States would be self-sufficient and would actually export more energy than it imported.

But the individual commodities were quite differentiated, so in the projection the IEA had even suggested, there was I think a lot of misquoting of that particular fact in the media. A number of stories suggested that since they would be self-sufficient, Canada wouldn't have a market in the future to sell our energy products to the United States.

In fact, when you dig deeper and you look at the numbers and you look at the details, the market for Canadian crude, for example, would continue I think to the tune of about 3.7 million barrels, even by the projection of 2035. The electricity trade would continue at even greater rates than it is today. On the flip side, however, the United States would be exporting more coal, for example, and using less coal. So there were a number of changes in terms of which energy products, some of which Canada does today sell to the United States, but in general the products that we sell other than natural gas would continue to have a fairly high degree of demand.



Natural gas was the only exception. It's projected that by about 2020, the United States would be a net exporter of natural gas. Today we export all of our natural gas exports to the United States. I think it's still close to eight billion cubic feet a day, hence the very strong push for considering liquefied natural gas or alternate uses of natural gas in the Canadian domestic marketplace.

**Mr. Marc Garneau:** Thank you.

I haven't seen or read the IEA report to which you refer. Does it project, when it looks out 20 or 30 years from now, reduced use of hydrocarbons simply through the shift to other forms of energy? Is that factored in when those projections are made?

**Mr. Jeff Labonté:** It is. They tend to do it on a scenario basis, so they have different scenarios to allow for an understanding. That's why I referenced, in this most optimistic scenario, that hydrocarbons will remain at 47% of the energy mix.

Other scenarios, which suggest that renewables and reduced consumption of hydrocarbons would lead to lower emission profiles and higher use of renewables and other forms of non-emitting energy, also continue to grow, but even in the most optimistic scenario, 47% would still be the share of fossil fuels by 2035.

Where they tend to see a huge difference is with coal. Coal tends to be the one area in which you see a lot of variation. To the extent that non-emitting forms of energy enter the mix, they tend to offset the coal, but overall demand for energy continues to grow, so the rate of growth is smaller than it has been.

**Mr. Marc Garneau:** Thank you.

Again as part of my learning, on page 11 you have the pipelines and there's that little bit of pipeline from Portland to Montreal. I was wondering if you could explain to me what that is. Is that built or is it proposed and what does it do?

**Mr. Jeff Labonté:** That is an existing pipeline, the Portland-Montreal pipeline, that serves the Suncor refinery in Montreal. It is in use today and has been, I think, since the 1940s. I think at their last look, about 130,000 barrels a day arrives in Portland from foreign sources and is piped to Montreal and serves the Suncor refinery.

**Mr. Marc Garneau:** In looking west to east, if we talk about that coming into being, is there any possibility that some of the refined product could end up going to ports in the United States in future projections or is it going to just be consumed in eastern Canada or will there be an export market going out?

● (1610)

**Mr. Jeff Labonté:** That's a good question. Actually, today Canada exports more from its refineries than it consumes, so we are already net exporters. A little over 400,000 barrels a day of exported product leaves Canada and goes to, predominantly, the United States in gasoline and diesel. Much of that comes from eastern Canadian refineries.

There are also some imports that come in, so there is an active trade, mostly in central Ontario and Quebec, between Canada and the United States, but in net terms, more leaves than comes into Canada.

**Mr. Marc Garneau:** I have one last question on "MT per year". "MT" is million tonnes? Is that what it is?

**Mr. Jeff Labonté:** It's megatonnes.

**The Chair:** Thank you, Mr. Garneau.

We go now to Mr. Trost to start the five-minute rounds, followed by Mr. Calkins and Mr. Nicholls.

Go ahead, please, Mr. Trost.

**Mr. Brad Trost (Saskatoon—Humboldt, CPC):** Thank you, Mr. Chair.

Looking at some of these projections going forward—and here again, commodity prices change frequently—one of the things that struck me was how important the timeliness of the infrastructure would be. I'm sure Calgary and Toronto are not the only places in the world where people are saying, "The price for natural gas in Asia is pretty high. How can I sell into that market with some LNG?" What is the importance of the timeliness of getting the ports, the pipelines, etc., in place? If we don't get the infrastructure in place in time, will someone else take the market before we do? Will Qatar, will the Russians, will the Australians, take your pick, get there first? Will someone else get there before we do?

So I have two questions: What's the importance of being timely on the infrastructure, and who are our competitors, if there are any, who may get to those markets before we do and get the advantage of being first in play?

**Mr. Jeff Labonté:** Those are good questions. You've rhymed off all of the competitors to Canada: Qatar, Australia, Russia. The United States is a competitor as well. All of those countries, with the exception of Canada and the United States, are already LNG-producing countries and sell into the Asian market and into markets in Europe. The projections for growth of LNG are fairly substantive going into 2020 and out to 2035. I think calling it a race probably trivializes it a bit, but there is certainly an important timeliness component to capturing the LNG markets.

Today, there are, as I mentioned, six projects in Canada. There are 18 in the United States. Australia has, I think, seven that are under way, and Qatar is looking at doubling its capacity. So there are a growing number of countries doing the work that needs to be done to create the opportunity to sell into the growing markets in Asia for liquefied natural gas.

**Mr. Brad Trost:** So if we don't have our ducks in order here, will we end up missing out on the markets? If all of a sudden we don't get pipelines built in time, will gas producers start to say, well, I'm not going to do drilling in the prairies any more, I'm going to go somewhere else because that will be better?

Or is this just one of those things where we'll lose out in the one- or two-year delay and then we'll get in the market one or two years later?

**Mr. Jeff Labonté:** If I could rely on the IEA as an example, that might help answer the question.

The IEA's projection for North America, where we have about 24 projects on the plate, is that I think three or four will be built. If those three are in the United States—that fact I can come back to you on—then clearly there won't be any in Canada.

**Mr. Brad Trost:** So there is a strong timeliness, an urgency—

**Mr. Jeff Labonté:** There is a strong timeliness component. There are two components to this that I think are pretty obvious. One is that many of the relationships between producers of LNG and buyers are long term. Typically people are trying to sign 10- or 20-year contracts. So if you're locked into the contract that you have with a particular producer, you're less likely to be able to buy from anybody else.

Second, the capital investment needed for these projects is extremely high, and it's extensive. One doesn't invest \$10 billion or \$20 billion into a project without having strong foresight in terms of the future and having that contractual commitment.

In doing so, we need to have the resource, which we have. We need to have the system of regulation. We need to have the leasing. We need to have the pipelines. We need to have the companies that do the drilling. We need to have the approvals to move forward. We have to do the environmental permitting. Then you need to kind of build the facilities and ship.

•(1615)

**Mr. Brad Trost:** Okay.

I have about one minute left to go. Since I'm from Saskatchewan, I have to ask the uranium question.

In the 40-some seconds we have left, could you give a brief description of what the challenges and opportunities are for Canadian uranium exporting? You can refer to some of the agreements we have.

Just broadly, what do we need to do to open up markets for our uranium?

**Mr. Dave McCauley (Director, Uranium and Radioactive Waste Division, Electricity Resources Branch, Energy Sector, Department of Natural Resources):** Certainly.

We're quite diversified in terms of our uranium exports already. Cameco, which is the largest Canadian uranium producer in Canada, ships roughly a third of its uranium to the Americas, so to North America and South America, with another third to Asia and another third to Europe. We're quite diversified.

I'd say the limiting factor in terms of uranium exports relates to non-proliferation. It's very important that before anybody exports uranium to another country we have a nuclear cooperation agreement in place that ensures us that the facilities to which we export uranium or any nuclear material are safeguarded by the International Atomic Energy Agency.

So it's getting those agreements in place that is a limiting factor, but it's also important from a non-proliferation perspective as well. Recently the government established agreements with both China and India to get further access to those markets. In terms of China in particular, that will open up opportunities for enhanced exports of uranium to China.

**The Chair:** Thank you.

Thank you, Mr. Trost.

Mr. Calkins, you have up to five minutes. Go ahead, please.

**Mr. Blaine Calkins (Wetaskiwin, CPC):** Thank you, Mr. Chair.

I'd like to move the line of questioning, Mr. Labonté, to your slide presentation. One of your last slides, slide 14, says, "Canada's market-based energy framework permits companies to make business decisions on where new energy infrastructure is required".

It's been suggested by some in the House of Commons that perhaps the government should be more involved in directing and moving away from a market-based energy framework by requiring or forcing value-added...or under the guise of value-added, but it would simply be government intervention in that market-based economy in deciding where that would happen, and would put in place policies that would force infrastructure to be created that might not necessarily be created by a free and market-based economy.

What would that do insofar as affecting the price of the end product? What would it do in terms of safety? I don't know anybody who ships gasoline through a pipeline. I don't know anybody who ships gasoline in a tanker. I don't know anybody who does that. Crude oil itself is pretty inert. Synthetic crude oil is pretty inert.

Can you elaborate on what the effects of meddling too much in a market-based economy would do for the consumer and for the safety of the workers who work in the energy sector?

**Mr. Jeff Labonté:** Okay, I'll try to take that one on.

I'm not sure about the House of Commons debates about... But certainly, Canada's approach has been market-based. Typically, we have to respect the constitutional arrangements in Canada in which the provinces are the primary regulators of oil and gas development. So the ability of the federal government to intervene and impose particular activities has its limitations.

I think our experience with the energy sector has been that the market-based approach has served the country well. It responds to the nature of capital and to the nature of demand and supply and certainly has benefited greatly. My understanding and my relationship, since I have worked in the energy domain for some years, is that a number of the companies that operate here are global companies.

So the degree to which the government intervenes and dictates or suggests how things should or shouldn't happen tends to influence the investment decisions that are made. Since we are open and are certainly a country that accepts foreign investment, that investment competes globally. So whether it's Shell, Statoil, Exxon Mobil, Chevron, or whoever is active, the dollars they invest in Canada could be invested in the United States or India or Nigeria, or anywhere else around the world. So the degree to which those decisions are made or influenced, I think, is important, and having a market-based approach allows those decisions to occur.

With respect to the safety, I don't know if I can really comment as to whether it would be more or less. But there are pipelines that are built and that do ship gasoline, diesel, and finished products. We see that and we see tanker movements, rail movements, and truck movements, and certainly those exist today, though I can't comment to what degree. But crude oil is relatively inert when it's shipped, so that is an accurate statement.

•(1620)

**Mr. Blaine Calkins:** Typically, it's shipped as crude to the point where it's processed, and it's processed closest to where it's used and consumed. That's the way the marketplace is set up. I understand that.

As an Alberta MP, of course, I'm greatly concerned about the price differential when it comes to energy products. I'm very concerned about being able to diversify the market access for those products. With regard to pipelines, I maintain that building pipelines from my province with capacity to the east is good, to the south is great, and to the west is best in terms of our getting the best price we can for the companies that work in my province and for the citizens that I represent and the royalty regime that would benefit not only Albertans but all Canadians.

So I'm a little concerned about being able to have that market diversification. We've had significant feigned complaints today—and I'm being political here—about Canada's current situation with trade deficits. We know that trade deficits are a bit of a misnomer, because it wasn't all that long ago that we were in a multibillion-dollar trade surplus situation—in 2012—so these things oscillate as economies go.

Canada's economy is incredibly strong. We see that stronger economies are in trade deficits, because we have more buying power than do the countries that typically buy our products. But that notwithstanding, how would you juxtapose a situation in which you would block a pipeline or support a tanker ban on tankers off the west coast and yet complain about a trade deficit? It seems like a bit of an odd juxtaposition to me.

But would a pipeline to the west coast that would allow energy products off the west coast improve Canada's trade deficit situation?

**The Chair:** Mr. Labonté, could we have a very short answer, please?

**Mr. Jeff Labonté:** Okay.

Well, reaching tidewater, whether on the west coast or in the St. Lawrence Seaway, would improve the ability of producers to get higher returns for the crude oil products. That would improve our trade numbers; and certainly the trade numbers change, depending on the nature of the economy, so whether that's next year or the year after, those are the facts.

**The Chair:** Thank you very much, Mr. Calkins.

We go now to Mr. Nicholls followed by Mr. Allen and Monsieur Gravelle.

Go ahead, please, Mr. Nicholls, for up to five minutes.

**Mr. Jamie Nicholls (Vaudreuil-Soulanges, NDP):** Thank you, Mr. Chairman.

I want to start by clarifying a point brought up earlier about equalization payments. Equalization payments technically don't involve wealthy provinces making payments to poor provinces. Money is collected and distributed through the federal treasury, but, for instance, Mr. Allen, who lives in New Brunswick, which is a have-not province, pays more in equalization payments than does a temporary foreign worker working at Tim Hortons in Fort

McMurray, Alberta, which is a “have” province. It's a complex formula, and you can't just say that it's one province paying it to another. Everyone pays into equalization if they're making a certain amount of income in this country, so let's not simplify that debate.

The same thing goes with gas prices. Gas prices are complex. I talked to the people at the Suncor refinery and asked the same question that Ms. Crockatt asked, which was if we bring product to the east, will people in my riding get cheaper gas? The answer was a flat-out no.

They said the price was set in New York. I have question marks about how gas prices are set. I'm still not clear on it, but I got the answer from Suncor, which is going to be the beneficiary of this project and the differential between WCS and Brent.

My question is on the integrated trade support fund. My colleague, Mr. Julian, was asking about that. Could you tell me what the value of that fund is?

**Mr. Jeff Labonté:** I can't, but my colleague from DFAIT could.

**Ms. Carolyn Knobel:** If I can take a step back to clarify it, that the fund is to go to posts, our embassies abroad. It's a competitive-based fund. They apply, describing the initiatives they want to support in their markets. It is then compared against sector strategies, which are prepared in the bureau, and they have to align with those. It's a competitive process.

The amounts depend on the sector. I'll have to get back to you, but the fund in its entirety, the ITSF, is in the range of \$3 million annually, I believe.

•(1625)

**Mr. Jamie Nicholls:** Wonderful.

Are there any funds available that go into market diversity, other than the integrated support fund?

**Ms. Carolyn Knobel:** Do you mean through the Department of Foreign Affairs?

**Mr. Jamie Nicholls:** Through any department, to your knowledge.

**Ms. Carolyn Knobel:** There is another fund within Foreign Affairs, which is called our client service fund. Again, it supports our missions abroad. I'd have to get back to you on the numbers for that. These are not specific to market diversification. They are to support the work of the Trade Commissioner Service, so supporting our exports of products and services abroad.

**Mr. Jamie Nicholls:** How do the 44 missions abroad prioritize their goals? How are they prioritizing?

**Ms. Carolyn Knobel:** It is a mission-based analysis based on their local knowledge of their markets through their contacts, their research, their analysis of the market, what they view are the best opportunities for Canadian products and services to be exported into that market.

**Mr. Jamie Nicholls:** What is the goal of the missions themselves, generally—the main goal?

**Ms. Carolyn Knobel:** The main goal of a Canadian mission in its entirety, or do you mean the trade aspect, more narrowly?

**Mr. Jamie Nicholls:** Yes.

**Ms. Carolyn Knobel:** The trade commissioner group within the mission would be there to support Canadian exports abroad. It would be there to attract foreign investment into Canada. It would be, in addition, to speak to Canadian values—for example, corporate social responsibility. The broader mission in its entirety is to speak to Canada's dialogue with the host state.

**Mr. Jamie Nicholls:** What are the results of these missions, and what kinds of metrics do you use to measure the results?

**Ms. Carolyn Knobel:** If you are referring to a trade mission, our trade programs at posts measure things such as service requests by Canadian business. They speak to the number of out-calls they have, the number of economic opportunities pursued—economic opportunities identified as a result of the connections they've been able to bring together between interested Canadian exporters and local buyers.

**Mr. Jamie Nicholls:** I have a last question about the slide that shows the benchmark prices, WCS versus Maya. I know you are not petrochemical engineers, but what is the difference between Maya and WCS? I know they're both heavy crudes, but are they similar in consistency in every way? Do they have different effects on the infrastructure they're moving through? Does one type wear out pipeline infrastructure quicker than the other, or are they basically the same? I know Maya is already passing through the line, through the Portland-Montreal line, and through Line 9 as well sometimes. Could you address that?

**Mr. John Foran:** Yes, I can talk about that.

Maya, of course, is produced by Mexico. It's heavy crude, mainly from offshore fields. It has an American Petroleum Institute gravity of about 23 degrees and a sulphur content of about 4%. Western Canada Select, or WCS, is a blend of bitumen, synthetic crude oil, and diluent, which has an API gravity of about 22 degrees and a similar sulphur content to Maya. They're very similar crudes. Maya is a slighter higher-quality crude because it's not quite as heavy, so normally it sells for about \$6 a barrel more than Western Canada Select, but currently it's much greater than that.

• (1630)

**Mr. Jamie Nicholls:** One is not more corrosive than the other, I take it.

**Mr. John Foran:** NRCan has done work investigating whether different types of crudes are more or less corrosive within pipelines. The results show that heavy crudes are heavy crudes, and there's no real difference in terms of the internal corrosion rates with different types of crude oils.

**The Chair:** Thank you, Mr. Nicholls.

We'll go now to Mr. Allen, for up to five minutes.

**Mr. Mike Allen (Tobique—Mactaquac, CPC):** Thank you, Chair.

Thank you to our witnesses for being here today.

Mr. Labonté, I have a two-part question. International Trade might want to chime in on this one as well.

On slide 6 you said, and then you reiterated in one of your answers, that under the most optimistic renewable scenario, demand for oil and gas represents 47% of global energy demand in 2035.

I was reading an *EnergyBiz Insider* article this morning that talked about China, looking at the significant investment and investment capital they're trying to get in for renewables in the next number of years. They're talking \$65 billion to \$70 billion next year, and then somewhere up to \$200 billion by 2025. They're looking to be one of our major customers, or were looking to be a major customer, for oil exports.

Are we seeing a trend like that in other countries that potentially would be our exporters? In terms of that time window, if they're going to go to 15% of power from non-emitting sources by 2020, and then 30% by 2050, what is the risk, and is the timeline small, for us to get into that market?

**Mr. Jeff Labonté:** The analysis is extraordinary in terms of the rates of growth, China and India being primary drivers of that growth.

In terms of reference points, perhaps I can use natural gas as an example. China is growing at such a rapid clip, but the point at which they're growing from is also quite small. So with regard to the volume they're going to be consuming, even though the percentages of fossil fuels may be not as high as in other traditional economies, natural gas is going to quadruple, as you said, from about five trillion cubic feet a year now to about 20 trillion cubic feet a year in terms of consumption by 2035. That volume of gas consumption is....

I think we consume five trillion cubic feet a year here now in Canada. Four times what we consume today will in a short period of time be consumed by China alone.

Japan is transitioning from, for example, its different energy forms, and is rapidly growing its renewable base as well as its natural gas consumption; India similarly.

So all of them are moving, and they have the ability, given the size and the way their markets work, to invest heavily in renewables, traditional fossil fuels, nuclear, and even other alternative energy forms, such as wood pellets, synthetics, and other things.

**Mr. Mike Allen:** The other side of this is that in our previous study, we heard some presentations made with respect to some of our renewable technologies bidding into foreign countries as well. I think this might be an International Trade question, but are there opportunities for the export of that renewable energy technology because of some of these trends in significant investment capital looking for renewables?

**Mr. Jonathan Will (Director General, Electricity Resources Branch, Energy Sector, Department of Natural Resources):** Thank you for that question.

There are significant opportunities for Canadian companies. Demand for electricity from 2010 to 2035 is expected to expand globally by 70%. That's an average of 2.2% per year, and over 80% of that growth is in non-OECD countries, with over half of that, 38%, in China specifically.

Canada has significant expertise in the electricity sector. We have significant expertise in the generation of hydroelectricity. We're the third-largest producer of electricity in the world. We have significant expertise in long-distance transmission of electricity due to the long distances of our hydro system, and we are a leading supplier and designer of those things. We also have expertise in the nuclear field, as well as a project done by SaskPower for putting a carbon capture and storage unit on a coal-generating facility at Boundary dam, which has the possibility of exports to countries that are relying on coal for electricity generation.

So a variety of opportunities exist for Canadian companies.

**Mr. Mike Allen:** Thank you.

I have about 30 seconds left, and I just want to refer to your slide 7. There you talk about Canadian gas and Canadian oil production. One of the slides with oil production talks about an amount from eastern Canada, but the Canadian gas production to 2045 does not have a statement as to how much gas production we have projected from eastern Canada.

Is there a projection that eastern Canada will develop its natural gas resources? I don't see that in here.

• (1635)

**Mr. Jeff Labonté:** The projection takes into account the Sable Island and the Nova Scotia gas projects, which are expected to end at some point in the late 2020s should they not reach new fields and have new production.

**Mr. Mike Allen:** Thank you.

Thank you, Mr. Chair.

**The Chair:** Thank you, Mr. Allen.

We go now to Monsieur Gravelle for up to five minutes.

Go ahead, please.

**Mr. Claude Gravelle (Nickel Belt, NDP):** Thank you, Mr. Chair.

I'm sorry I missed your presentation. I was a bit late coming in.

I would like to expand on a question that my colleague Mr. Nicholls asked.

Mrs. Knobel, I believe you said that the integrated trade support budget was \$3 million. Is that for all products worldwide?

**Ms. Carolyn Knobel:** That would be across the sectors, and it's across identified priority sectors. As well, there is a component there for CSR projects initiatives—again, those that posts identify—and there is a component in there with respect to Canadian investment abroad.

**Mr. Claude Gravelle:** Does that include staff salaries?

**Ms. Carolyn Knobel:** No. When I was referring to these numbers, I wasn't speaking to FTEs or departmental budgets. This is a fund available for specific initiatives.

**Mr. Claude Gravelle:** What would this \$3 million get you?

**Ms. Carolyn Knobel:** This allows posts to highlight in their markets Canadian expertise, products, and services.

**Mr. Claude Gravelle:** In your opinion, should that fund be increased? Would it benefit Canada and the industry if that fund were increased?

**Ms. Carolyn Knobel:** I don't think that's for me to speak to. It's certainly for me to look to the project proposals that come in and assess them against the funding criteria and the sector strategies that the department has prepared.

**Mr. Claude Gravelle:** All right. Thank you.

As I said, I didn't hear your presentation, but I did read the notes that were supplied to us, so I'd like one of you to comment on infrastructure. I'm particularly interested in energy infrastructure that's missing; there are some gaps in the country, right across Canada.

For example, in the Ring of Fire, there's no electrical grid. Is it possible for you to supply us with a list or a map of places in Canada that have no infrastructure for energy and for electricity specifically?

**Mr. Jeff Labonté:** We can probably connect with the mining sector in Natural Resources or they may be invited to join you. I'm not sure that I quite follow you, but are you thinking about areas where there's economic development potential and there isn't electricity delivered for it?

**Mr. Claude Gravelle:** That's right. There's no infrastructure.

For example, in the Ring of Fire, there's no electricity. There's no road. But the Ring of Fire is a \$50-billion project and there could be a lot of money. Some people even say that it's bigger than the oil sands, but there's no infrastructure.

**Mr. Jeff Labonté:** My colleague from the electricity branch says he can help to respond to that.

**Mr. Jonathan Will:** We can provide you a map showing where all the existing infrastructure is, and we could supplement that with planned expansions.

**Mr. Claude Gravelle:** Is there a role for the federal and provincial governments in getting infrastructure to these places? Is there a role for the federal government to play, along with the provincial government?

**Mr. Jeff Labonté:** I guess it depends on the type of project, the type of infrastructure that's required, and what kind of programming is available in different federal departments. Natural Resources Canada does not generally fund infrastructure development activities. It's not generally in the mandate of the way we work, but Infrastructure Canada has a mandate to fund infrastructure. I don't know whether energy activities for these types of developments are applicable. I'm not sure.

•(1640)

**Mr. Claude Gravelle:** I've asked you if you could supply me with a map of where we need infrastructure. Are there other places in Canada where there is a chance for us to develop natural resources but there's no infrastructure, no way of getting at them? We're quite familiar with the Ring of Fire, but are there other places in Canada?

**Mr. Jeff Labonté:** I believe the north has tremendous potential for energy and resource development, and I think there have been a number of different projects in different parts of the country to look at that. The degree to which those things have access to infrastructure depends on where they are. I guess it depends on the viability of the project and nature of the project. Some are mining related. Some might be forestry related.

You would perhaps have to be a bit more precise about what types of projects, but for the Ring of Fire, for example, I think you've given us something we can develop a map on and provide to you.

**Mr. Claude Gravelle:** Okay, sure.

I have no further—

**The Chair:** Thank you, Mr. Gravelle. Your time's up.

We go now to Mr. Leef, followed by an NDP member, and then Mr. Anderson.

Go ahead please, Mr. Leef.

**Mr. Ryan Leef (Yukon, CPC):** Thank you, Mr. Chair.

Thanks to all the witnesses.

Just to follow up on some of the points Mr. Gravelle was making, of course being from the north, I know that we've certainly benefited from the gas tax fund and its indexing, which has allowed the communities across Canada to make some important infrastructure investments. I certainly see the benefits in our communities. Of course, if the municipalities or the territory decides to spend that on energy infrastructure, they are able to do that, and if they are inclined to spend it on road infrastructure to support energy enhancements or mining opportunities and those sorts of things to build on their energy sector, they have been more than willing to do so.

Just to build a little on Mr. Gravelle's question about northern opportunities, we appreciated the green energy fund, which is a large contributor to the Mayo B hydroelectric project in the Yukon that is now supporting a lot of mines in the Na-Cho Nyak Dun area of the Yukon in the community of Mayo.

Of course we have liquefied natural gas interests in the Dempster area and lots of growth potential. So much of the geothermal and wind energy exploration projects are being jointly funded by the territorial government and the Canadian government.

I guess that's my “props” for things going on in the Yukon.

I want to move quickly. You made a comment that by about 2035 the electricity supply will continue to grow into the U.S. market. Your highlights show the energy benefits to Canada contributing about 10% of Canada's total GDP. But I didn't see anywhere in your slide that would show.... I see the 47% growth, of course, on slide 6, but there's no reflection here—or maybe I missed it—of what the estimated percentage of GDP percentage it will be.

Will it just grow and every other sector of the Canadian economy grow equally with it, or is the energy sector going to outstrip other contributing sectors and represent more than 10% of Canada's GDP by 2035?

**Mr. Jeff Labonté:** That's a good question. I'm not sure we could forecast GDP growth and percentage of it as energy out that far, but we could certainly maybe give the committee some examples of where it has been. Just like mutual funds, I'm not sure I'm ready to predict where it's going to go.

**Mr. Ryan Leef:** Sure.

**Mr. Jeff Labonté:** But I think we could give you that.

**Mr. Ryan Leef:** That would be great.

Can you give us a little bit more information on the breakdown? You say 75% of power generation in Canada is non-emitting.

Can you maybe touch on exactly what that means, and then what the other 25% is, but maybe give us a bit of a split on that 75% and what non-emitting means from your perspective?

**Mr. Jonathan Will:** I'd be happy to answer that question.

In terms of electricity generation, 60.2% of electricity generation is hydroelectric. Wind currently represents 1.6%, and biomass represents 1.4%. So in total, renewables represent over 63% of electricity generation.

When you add in nuclear, which is approaching 15%, it gets you to over 77% of electricity that is generated from non-emitting sources. That's where the 77% comes from.

You asked about the remainder. The remainder is mainly coal, but there is some oil-fired electricity generated in some places. For example, currently a lot of the electricity generated by the Holyrood plant in Newfoundland is oil-fired.

•(1645)

**Mr. Ryan Leef:** And the coal is expected to decrease in the upcoming years—is that correct?

**Mr. Jonathan Will:** I don't have a percentage for coal, but the government has imposed restrictions on the emissions of new coal facilities. This puts downward pressure on coal going forward.

**Mr. Ryan Leef:** Without forecasting too much, do you see that shifting any one of the other sectors up, like a draw on hydro, or do you see diversification then starting to lean toward wind, or biomass, or a combination of those things? I don't necessarily need numbers, but you might have a market viewpoint on that.

**Mr. Jonathan Will:** In terms of the future outlook, I don't have an exact breakdown of how it would look under current policy conditions.

I forgot to mention, of course, that a lot of electricity of the non-emitting 77% is generated from gas too.

**Mr. Ryan Leef:** From an international perspective, you've mentioned that Canada is a global energy leader. In terms of our market diversification strategies, our product diversification strategies, and where we want to go with that, what would you say that other countries would say about Canada's path forward on this?

Where would they see us in terms of having these resources and our utilization of them? Do you think they would see us as doing a pretty good job or as underutilizing them? Is there any sort of external advice we're hearing that might help guide this discussion and stop us from having to reinvent the wheel, so to speak? Are there any helpful things that you might hear on an international stage?

**The Chair:** We need a very short answer, please.

Mr. Labonté.

**Mr. Jeff Labonté:** Internationally, I think Canada is viewed by any other country as extremely favourable. I don't think there's a country in the world that has the assets we have from an energy point of view.

Most of my colleagues who I speak to at the International Energy Agency Governing Board would die to be Canadian, to have these energy assets at their disposal, and be able to have those. If you look at the foreign investment in our energy infrastructure, you see that other countries and companies from them countries are investing billions of dollars. The climate is attractive. The assets are world class. The capabilities of Canadian workers and Canadian regulatory systems to support development are very strong.

**The Chair:** Thank you.

Thank you, Mr. Leef.

We'll go now to Monsieur Blanchette for up to five minutes.

Go ahead, please.

[*Translation*]

**Mr. Denis Blanchette (Louis-Hébert, NDP):** Thank you, Mr. Chair.

Thank you to our witnesses. Their comments are very informative.

We're discussing diversifying markets, products and so forth. I would like to know whether the various government departments and agencies responsible are working together to promote market diversification. Is there some sort of task force studying the issue to determine where we should invest and how the federal government should be involved?

**Mr. Jeff Labonté:** That's a great question. The discussion is ongoing at a number of levels. There are cabinet and government

directives, as well as the decision-making process addressing relationships and international affairs.

[*English*]

At the same time, we have our Foreign Affairs focus on international trade.

[*Translation*]

But, as regards energy, generally, we do not have a committee.

**Mr. Denis Blanchette:** So there aren't really any coordinated efforts or investments in that regard. You monitor what happens in the market and you take note. Does that about sum it up?

**Mr. Jeff Labonté:** I wouldn't say that was the case. There are specific activities happening within our department. Some of them involve the minister and others involve the deputy minister as well as senior department executives. In addition, the international offices have cooperative agreements with China, India, Europe, the U.S., Brazil, Chile and others. Discussions on science and technology are happening.

• (1650)

**Mr. Denis Blanchette:** But, from what I gather, there isn't really any program or fund dedicated to diversification, specifically.

**Mr. Jeff Labonté:** There is no funding, no.

**Mr. Denis Blanchette:** Very well.

I see that there are quite a few oil pipeline projects. It's a bit like the real estate market: developers want to build a lot, and then one day, the market dries up and they're stuck with all those building projects. I get the sense that if all the projects go forward, we'll have an overcapacity problem on our hands. Am I wrong?

Let me give you an example. It pertains to eastern Canada, Quebec and the Atlantic provinces. The pipeline projects alone exceed our refining capacity out east by 33%. With that in mind, I have two questions.

Given that all the major producers and exporters are already on the Atlantic coast, can it be used as an export channel?

I would also like to know whether what we want to put in the pipelines bound for eastern Canada matches what refineries out east can do in terms of their capacity, without a major investment? Do we know whether refineries out east have the necessary capacity? Was that considered?

**Mr. Jeff Labonté:** Certain parts of that question are rather complex. It is, however, true that a very large number of projects have been proposed and that the markets will indeed determine which ones are carried out. So there are more projects than the market is able to handle, yes.

It is complex, though, because some of the proposed pipelines are designed to transport types of crude oil that are naturally in line with refineries in Quebec and New Brunswick. There are also tensions in terms of which type of product goes to which refinery.

As far as refineries in eastern Canada go, we are talking about mostly light crude oil. However, light crude is an abundant resource in Canada. We currently produce roughly 1.8 million barrels a day, and that's a lot. There is also Bakken, in the U.S., which is a major reserve, a key production area. So Quebec's refineries may benefit from North America's light crude oil.

It is also possible to access other investments to create a process to treat heavy oil or bitumen.

Lastly, Quebec City and Saint John, New Brunswick, could use vessels or tanker ships for export.

So there are definitely possibilities.

**Mr. Denis Blanchette:** Thank you.

**The Vice-Chair (Mr. Peter Julian):** Thank you very much, Mr. Blanchette. Your time is up. That being said, those were very good questions.

I will now turn it over to Mr. Anderson.

**Mr. David Anderson (Cypress Hills—Grasslands, CPC):** Thank you, Mr. Chair.

[English]

I've heard a little about the importance of infrastructure and the importance of market promotion. It strikes me that we've got some well-defined products here. We've got a world market for our product. We're recognized around the world. Do you see the issue as being the necessity of our promoting our product in the marketplace or is the issue a lack of infrastructure to get the product to the marketplace?

• (1655)

**Mr. Jeff Labonté:** I don't believe there's an issue about people not understanding Canadian crude products. I think it's about the infrastructure. That needs to correspond to the growing production.

**Mr. David Anderson:** Is the most critical element of what we need to do to diversify our markets the expansion of infrastructure?

**Mr. Jeff Labonté:** From a commodity perspective, yes.

**Mr. David Anderson:** What would you think from a trade perspective? Would you agree with that? We are recognized around the world. We've talked about our capacity and the great resources we have. Is an issue you face the fact that we can't get our product to the marketplace?

**Ms. Carolyn Knobel:** To confirm with my colleague here, yes.

**Mr. David Anderson:** I want to talk a bit to you, Ms. Knobel—and the others can answer. The question is, how can energy market diversification be sped up through trade, trade relations and arrangements? Do they help speed up our ability to diversify our marketplaces?

**Ms. Carolyn Knobel:** Our relationship with our counterparts abroad identifies buyers. If we're speaking commodities, it's buyer identification. But to the extent that market diversification hinges on infrastructure, our contacts at post would not be able to...

**Mr. David Anderson:** Okay. Shifting to a discussion of trade relations and trade agreements, how do they impact market diversification?

**Mr. Jeff Labonté:** I think one of the things we see, from a policy perspective in energy market diversification, is the need to ensure that our advocacy and diplomatic efforts, for example, in Europe, continue to recognize the responsible development of the resources that occurs in Canada and that there aren't trade barriers of a policy or regulatory context that emerge.

We see the same thing in the United States with renewable standards, and we see the same thing in other jurisdictions where there are efforts to protect domestic production of energy in certain markets at the expense of large exporters like Canada. So there is a fair degree of work that happens on the international collaboration side, from energy department to energy department and from international trade and foreign relations to foreign relations, to ensure that barriers aren't produced to prevent Canadian exports of crude oil, gas, etc.

**Mr. David Anderson:** I'd like to focus on that a bit. Internationally, what are the main drivers in the diversification of energy markets right now? Over the next few years, what will be the main drivers of market diversification in terms of energy? You can talk renewables and non-renewables if you want. Clearly we've had some economic challenges over the last years, and I'm just wondering, what is going to drive that and how should we be able to respond to it?

**Mr. Jeff Labonté:** I think what's driving it is growth of economies, particularly developing economies that want to create a larger middle class and a larger society that reflects closer the one we have in Canada. Certainly, that demand is growing quite a bit. The fuel, if you will, to energize that demand is crude oil, natural gas, electricity, renewables, coal. It's all of the above. So as a nation with all the energy assets we have, we have the ability to serve those markets.

**Mr. David Anderson:** Where would you see the best business opportunities?

**Mr. Jeff Labonté:** Certainly in Asia Pacific.

**Mr. David Anderson:** I guess I'm also asking where you see it in terms of the technologies—if you want to call it that—or products that we have. What would you see as the things we should perhaps be focusing on if we want to maximize those benefits?

**Mr. Jeff Labonté:** From a technology point of view, I think it's a much broader landscape. Our neighbours next door still offer tremendous technology opportunities for Canadian firms to operate. If you take the oil and gas sector, Canadian expertise on flaring, exploration, development, the seismic, the geology, and the engineering services.... Countries around the world are beginning to unlock their unconventional gas—for example, shale gas and tight gas—and they're coming to Canada looking for our seismic expertise, our drilling expertise, and our engineering expertise. It exists in Poland, Estonia, parts of Africa, and even in parts of Asia. So that's an example in oil and gas.



On the electricity side, it's to places where there are still untapped hydroelectricity and renewable potential, which exists in South America, as well as in Asia Pacific predominantly. It depends on what type and part of the energy system we're talking about. It's a bit broader, if you will.

• (1700)

**Mr. David Anderson:** From the perspective of global business opportunities, would you have anything to add to that?

**Ms. Carolyn Knobel:** As my colleague has said, it depends on what product or service we're talking about, nuclear being different from oil and gas. Innovations that we've seen take place in the Canadian oil and gas sector, for example, are the types of things that Canadian companies are looking to export abroad. Technologies that have been developed here would be the type of thing that we'd be looking to export abroad.

**Mr. David Anderson:** I'm going to follow up with a question that perhaps my colleagues across the way should have asked, or could have asked. What are the risks to Canadians in terms of market diversification? What are the biggest risks we face?

**An hon. member:** Conservatives.

**Voices:** Oh, oh!

**Mr. David Anderson:** I don't think so. I've had an NDP provincial government and they've put us 50 years behind, so I don't think we're any threat.

**Mr. Jeff Labonté:** I think that for us the risks are trade barriers that prevent the free flow and market-based solutions to things. To us, I think the risks are strain on capital, and strain on labour and resources and on our infrastructure that gets the energy to markets.

If we're going to sell to anyone other than the United States, we have to reach new markets, and we need the infrastructure to get there.

**Mr. David Anderson:** Ms. Knobel, do you see any other risks internationally?

**Ms. Carolyn Knobel:** No. I think that covers it.

**Mr. David Anderson:** Okay.

I would like to take a couple of minutes to talk about refineries. It came up in a couple of different questions. We did a study last year, looked into it in depth, and found out that we have refining capacity in Canada. It's not necessarily being used to the full extent that it could be. In fact, some of the refiners were complaining that they were just not able to make money at the levels that they were running at.

Could you speak a bit more to that issue of value added and the notion of refining and upgrading in the context of what we have in Canada already? I think Mr. Calkins made a very valid point, and it's one that we heard often at committee, which is that those finished products are not often refined far from the marketplace. They actually vary; the gasoline content, for example, varies in different places around North America. Can you just talk about the upgrading, the value added, in terms of some of those products?

**Mr. Jeff Labonté:** On the value added and upgrading in the refining sector, it's a global market. It's one in which the capital

investments are extremely large. They typically occur over long cycles where you expect to have a return on your investment, with stability and with market growth and activities. In North America, the market for refined petroleum products is declining, and it's projected to continue to decline, while in Asia and the Pacific you see it growing tremendously over the next 20 years.

From an investment point of view, this is a declining market in North America, and we already have the existing infrastructure. In Canada, we have a refining capacity of about 1.9 million barrels a day, and we currently produce 1.6 million barrels a day. There are 300,000 barrels a day of production that are not being used. That's capital that's idle and, generally speaking, on investment and capital you want to maximize your production and output.

In broad terms, there hasn't been a new refinery opened in North America I think since the mid-eighties. We've seen a consolidation of the refineries, but we've seen an expansion of some of the existing facilities and an upgrading of those facilities to make them more efficient. Refineries generally are capital-cost intensive; they really follow and track differential, their ability to attract and lock into finding the crude inputs and the feedstock.

They want to typically be located in the markets because there are different standards, environmental performance requirements, and different features, and they change seasonally. Gasoline is different in the summer than it is in the winter. There are warm climates and cool climates, etc. There are the distribution costs about how you get it intermodally between warehousing and then to your retail market. Then there's sort of the issue of contamination: when you move it through pipeline infrastructure, you increase the risk of contaminating the product. It means that you have to handle it more carefully and be a lot more careful with it, because it does get contaminated when it's transported over longer distances.

Your ability to reduce those risks as a business improves your ability to maximize your return.

**Mr. David Anderson:** I'd just actually like your comment, then, on transportation in the future. Do you see rail lines continuing to be one of the major modes of transporting some of these products? I think we have some of the investors in the States who have actually come out against the pipelines because they have significant investment in the railways. I'm wondering if you can comment on that.

We've discussed the safety of both of these. They both seem to be safe modes of transportation. Do you have any thoughts on that?

• (1705)

**The Chair:** Very briefly, please.

**Mr. Jeff Labonté:** Yes, sir.

From a policy perspective, I think the speed at which rail has really taken on an ability to move has caught everyone a bit by surprise. It comes with some of the unconventional development, some of the unconventional development in the Bakken and in other areas in Saskatchewan, for example. It has a field life that's expected to be shorter than that of large oil sands operations, for example, or in the offshore.

Rail is much more efficient for a 10-year horizon versus a 30-year horizon. It adds flexibility. That's the easiest way to put it.

**Mr. David Anderson:** Do you have any comment on the new discovery in Texas?

**A voice:** Huge.

**The Chair:** Mr. Anderson, you're out of time.

Let's go to Mr. Julian, who will be followed by Mr. Garneau and then Mr. Allen.

Go ahead, please, Mr. Julian.

**Mr. Peter Julian:** Thank you very much, Mr. Chair.

I want to get my head around the total trade supports on the ground. I know that we've talked about market diversification. It goes beyond energy resources. It goes to Canada's exports generally.

The integrated trade support fund is \$3 million worldwide for all products, right? Are there any other funds that exist through International Trade to provide support for Canadian products beyond that integrated trade support fund?

**Ms. Carolyn Knobel:** Again, to clarify, that is a fund separate and apart from the salaries and budgets of the various posts and the work they do. The integrated trade strategic fund is, across sectors, a competitive fund. There is another fund within the Department of Foreign Affairs called the client service fund. Money is directed toward our posts abroad to support specific project initiatives. Both of those funds are project-based, as opposed to the ongoing good work of the various posts and missions.

**The Chair:** A point of order, Mr. Anderson.

**Mr. David Anderson:** I don't mean to interrupt for more than a second here, but I'm not sure it's fair to our witness to ask her to know every trade promotional fund the Department of Foreign Affairs would have. That seems to be the direction of the questions over the last couple of—

**The Chair:** Thank you, Mr. Anderson.

Of course, you can feel free at any time to say you don't have that information and leave it at that.

Go ahead, please, Mr. Julian.

**Mr. Peter Julian:** Thank you, Mr. Chair.

It is important, and I don't necessarily expect answers today, but on some of these questions—we have an esteemed panel in front of us—I'm sure they'll be able to get back to us. It's helpful when we talk about market diversification because a \$3 million integrated trade support fund over 44 missions averages out, if you crunch the numbers, to about \$186 a day per mission. Now \$186 a day in product promotion in a market like France or Great Britain or Japan would be insufficient even for a hot dog stand. To say that we're trying to build an export strategy with \$186 a day for product promotion astounds me.

Mr. Chair, as you know, it's very relevant, because Australia spends half a billion dollars doing what apparently we do with \$186 a day for each mission. The European Community spends \$125 million just for their wine industry alone in product promotion. If

we're talking about market diversification, I think that's a very good starting point.

I think it's a valid question. I don't know, Ms. Knobel, if you have the amounts for the client service fund as well. That would be in addition to the integrated trade support fund. Do you have any sense of that, or could you get back to us on it?

**Ms. Carolyn Knobel:** I'll have to get back to you on that and on the breadth of promotion programs that may be out there beyond my experience.

**Mr. Peter Julian:** I think Mr. Labonté wanted to add something.

**Mr. Jeff Labonté:** In support of my colleague, I think there are quite a few other parts of the Government of Canada that provide trade promotions. There's the Export Development Corporation, the Canadian Commercial Corporation—there are other forums I think where you have a buyer and a seller working together and trying to make arrangements in which there's assistance offered by different federal agencies.

I expect the program she has mentioned is one, but I would think we might be able to do a bit more and provide you with some information on other agencies.

**Mr. Peter Julian:** My specific question was about product promotion, whether we're talking about energy products or other products. We're aware of other government agencies who provide support. The figures I just cited, the half billion dollars for Australia, the \$125 million for the European Union.... The United States' product promotion just for the cattle industry is \$60 million. Those are all product promotion funds.

That's really the intent of my question, to get to the bottom of product promotion beyond the trade commissioner network, which obviously is underfunded, as trade commissioners have told me repeatedly when I've gone around the world. They can't even buy a cup of coffee for a potential client of Canadian products or services. There's underfunding on that side. There's very clearly underfunding on product promotion. So when we talk about market diversification, that's a key starting point: what the government is not doing now.

Mr. Labonté, you talked a bit about expertise. We haven't gone too much into renewable energy and expertise. A lot of countries that have a very robust renewable energy strategy or a green energy strategy—Germany is one, with solar power. Denmark, with their extensive wind turbine research and development and production industry, has developed an expertise for export markets.

I'm wondering to what extent NRCan has a green energy export component strategy, based on expertise, or whether there's involvement for NRCan in green energy and export development even on the basis of studies or looking forward to the future—the provision or promotion of Canadian expertise.

•(1710)

**Mr. Jeff Labonté:** I'll ask my colleague from the electricity branch to respond.

**Mr. Jonathan Will:** Thank you for that question. Most of the support that Natural Resources Canada gives specifically towards renewable energy is through support to technology-demonstration projects, for example, integrating renewable intermittent wind and solar and other renewables into the grid. One of the major challenges for renewable power, especially non-traditional power such as wind and solar, is the fact that it's intermittent. So there's significant work being done on how to better integrate them, using smart-grid technologies in addition to looking at potential storage techniques.

**The Chair:** Thank you very much.

Thank you, Mr. Julian.

We go now to Mr. Garneau. Go ahead, please, for up to five minutes.

[Translation]

**Mr. Marc Garneau:** Thank you, Mr. Chair.

Does Canada export coal?

[English]

**Mr. Jeff Labonté:** Yes, Canada exports coal.

**Mr. Marc Garneau:** Can you give me an idea of how much?

**Mr. Jeff Labonté:** Thermal coal and meteorological coal are two different types. Meteorological coal is for steel production. It was about \$6.8 billion in 2012.

[Translation]

**Mr. Marc Garneau:** Does Canada export coal only to the United States, or all over the world?

**Mr. Jeff Labonté:** All over the world. That said, the U.S. exports more coal than Canada.

**Mr. Marc Garneau:** Does the coal come mainly from Alberta?

**Mr. Jeff Labonté:** It comes from Alberta and British Columbia, but other parts of western Canada as well, in smaller amounts.

[English]

**Mr. Marc Garneau:** Okay.

Mr. Will, did I understand you to say that biomass was a non-emitting source of energy?

**Mr. Jonathan Will:** It's a renewable source.

**Mr. Marc Garneau:** Right. But it does emit. I assume it emits.

**Mr. Jonathan Will:** It emits and it recaptures.

**Mr. Marc Garneau:** But does it put CO<sub>2</sub> into the atmosphere? That's my question. What does "emitting" mean? What does "non-emitting" mean?

**Mr. Jonathan Will:** Biomass, when it grows, absorbs carbon dioxide. Then when you produce energy with it, it releases it. But then when it grows back, it regenerates. It recaptures it.

**Mr. Marc Garneau:** Right. But when you talk about 75% or more being non-emitting, I think of hydro and things like that. But is biomass part of your non-emitting budget?

**Mr. Jonathan Will:** Yes, it's a small amount. It represents 1.4% of total electricity, and it would be that portion of the 77%.

**Mr. Marc Garneau:** One always sees reference to geothermal and marine energy, and the great potential of these energies. Are they still at pilot-project levels, or are significant amounts of energy being generated in Canada from these sources?

•(1715)

**Mr. Jonathan Will:** Geothermal currently is in demonstration phases. There are no large commercial operations for the generation of electricity. In terms of the other example....

**Mr. Marc Garneau:** It's marine.

**Mr. Jonathan Will:** In terms of marine, there have been a few pilot projects done by industry. The federal government is working toward developing a framework for managing Canadian offshore wind.

**Mr. Marc Garneau:** Is it your opinion that geothermal and marine forms of renewable energy are slated to grow dramatically? Or is this going to be one of those things for which we'll never really get past 1% or something like that?

**Mr. Jonathan Will:** They have significant potential. The issue is how the cost curves of all these various technologies evolve over time and whether they become cost-competitive. There's a competition among renewables themselves as well as against conventional sources of electricity generation such as hydro and natural gas. So it really depends on the assumptions and the progress that's made in reducing costs. You clearly see the cost reductions from some of these technologies. It just becomes a question of when they will reach parity with other things. But premium electricity companies are willing to put on alternate sources.

**Mr. Marc Garneau:** I understand that. In practical terms, what's your opinion of how far away geothermal is from being widely used?

**Mr. Jonathan Will:** Generally, in terms of electricity, the costs in most applications are currently not competitive with other sources.

**Mr. Marc Garneau:** Are they really not competitive, or are they approaching it? I'm sure it's technically feasible; it's been done. Is it really 30 years into the future, 50 years into the future?

**Mr. Jonathan Will:** There are some limited applications that would be sooner than that, but on a wide scale it is likely to remain small.

**Mr. Marc Garneau:** Thank you.

**The Chair:** Thank you, Mr. Garneau.

We go now to Mr. Allen, followed by Mr. Trost, and then the NDP, briefly.

Go ahead, Mr. Allen.

**Mr. Mike Allen:** Thank you, Mr. Chair.

I want to follow my line of questioning a little bit on natural gas and exports, but I couldn't help but make an observation, Mr. Chair, about some of the questioning by the NDP—and I typically don't lob a political comment in every now and then, but today I feel I need to. I'm shocked by all the questions being asked on further investment. If we put more investment into the oil companies' marketing in these other countries, I can't imagine we'd be called for subsidizing big oil by the opposition.

**Voices:** Oh, oh!

**Mr. Mike Allen:** The position should be somewhat consistent, I would hope.

I'll continue on natural gas, given that I was just given gas.

On the projection in your chart on slide 7, can you talk about the source of the bump in natural gas production in the 2020 range in the regions of Canada where we see that?

I also noted your chart on page 21, where you show the consumption and domestic supply of gas going to the U.S. Do you have an overlay of the demand curve for Canada that corresponds with this supply chart on page 7?

**Mr. Jeff Labonté:** The predominant bump in slide 7 is the coming-on-strength shale gas and unconventional gas development. Much of it is tight and shale gas, just to be accurate about it.

**Mr. Mike Allen:** Do you have locations for that?

**Mr. Jeff Labonté:** The majority of the locations listed there are in western Canada. They continue to be in western Canada.

Most of the projections recognize the potential in eastern Canadian provinces but recognize that there isn't a regulatory context nor a context that supports the development of those resources at this point in time.

**Mr. Mike Allen:** Do you also have the domestic demand curve to apply to that?

**Mr. Jeff Labonté:** I'm just going to reference that. I'll try to be quick here.

Is this the U.S. demand curve?

**Mr. Mike Allen:** You show that in number 21, but do you have the same kind of chart for the Canadian demand, projected?

• (1720)

**Mr. Jeff Labonté:** We would be able to supply it to you. We don't have it with us.

**Mr. Mike Allen:** Would you supply it to the committee? I'd like to understand where our supply and demand is going. If you look at the U.S., obviously we're going to be competing in the same market because they're going into a negative position.

**Mr. Jeff Labonté:** We are. Some of it actually just clarifies the flow between. Western Canada exports; eastern Canada imports. Some of it will remain that way. Net it might be zero, but it will actually have significant flows in both directions.

**Mr. Mike Allen:** I appreciate that.

Mr. Will, I want to pick up on some of the discussion you were having before on the potential for market in the renewables area, whether it be hydro or others.

Are you aware of the work being done by utilities, energy service companies, and others to market themselves? On the trade side, Mr. Labonté talked about EDC and others as financing opportunities for companies that might be looking to build projects in these other countries. Can you talk about the potential for that as well?

**Mr. Jonathan Will:** As you mentioned, there are significant opportunities for Canadian companies, particularly from areas of strength for Canada. Hydro is one where there is a demand worldwide for it, and also long-distance transmission, which is the result of our large geography and the fact—

**Mr. Mike Allen:** Do you see us having the expertise that most other countries don't? You mentioned that before.

**Mr. Jonathan Will:** We do have expertise that other countries don't have, and there is—

**Mr. Mike Allen:** Including energy planning?

**Mr. Jonathan Will:** There are a number of Canadian companies that export and provide consulting services and project management services overseas.

**Mr. Mike Allen:** The second part of that is EDC. We had one company here that was in unconventional gas. They had different technologies, but they were looking at bidding on energy projects in other countries.

Do you see that as a growing market?

**Mr. Jeff Labonté:** I can say anecdotally that we have a lot of interaction with industry at conferences and fora, and certainly in our interactions we hear from a lot of companies that are pursuing business opportunities globally. It happens that given the way we develop our energy resources and the resources we have, they have great opportunities—the horizontal drilling and drilling technology companies, the engineering firms, the project management firms.

Even as we move across to electricity, the companies that do auditing and projects that look at conversion of different electricity, like lighting and heating, what you might call the mechanical side of homes and businesses...companies are creating products and selling them around the world. We hear about that quite frequently.

NRCan doesn't really track that part. It's more of an Industry Canada domain, but we certainly work with and hear about that.

**The Chair:** Thank you, Mr. Allen.

Mr. Trost for five minutes.

**Mr. Brad Trost:** Thank you, Mr. Chair.

When I was first elected here almost nine years ago, we started an energy caucus, and some of the predictions we got there about where natural gas production prices, etc., were going have changed a little bit over the years.

In looking at news articles about some of the tight oil discoveries down in Texas, the article I was looking at on my BlackBerry said one of their finds has a recoverable 50 billion barrels—recoverable. With that in mind, from the best modelling we have, which again will change in a year, how can the tight oil discoveries that we're seeing stateside, and potentially here in Canada, start to affect where we're going to export and how we're going to plan for exporting oil? Could something very similar happen to our oil markets to what we're beginning to see happen in our gas markets?

**Mr. Jeff Labonté:** I would first say it's incredible that there isn't a resource projection I see on an annual basis that doesn't go upward. There are tremendous opportunities coming, and a lot of that is innovation and technology, those firms we were talking about previously finding better ways and finding better resources and estimating those.

The crude market in North America, light and heavy, the market for our heavy crude on the gulf coast, which would be served by Keystone, is pretty fixed cost in terms of its capacity. That's half of the United States' refining capacity, so that market will likely not transition much over the next 20 to 30 years.

The market for lighter crudes, in terms of refining complexes more in the eastern parts of North America, eastern Canada and the eastern United States—and we're seeing a lot of rail move to that market.... As the U.S. continues to produce its own domestic light sweet crude, the demand on Canadian light sweet crude will feel pressure, as will the demand for Canadian synthetic crude, synthetic crude being a complement or often a substitute for the light sweet crude, depending on the refinery output mix.

So there are some pressures on Canadian light crude. A fair bit of our—

• (1725)

**Mr. Brad Trost:** Some of our product mix is fairly safe, as far as moving to the U.S. gulf coast, but there's an anticipation of pressures that will begin to push toward export to Asia or Europe on our synthetic and our light. Is that an accurate summation?

**Mr. Jeff Labonté:** That's accurate. So as these fields come on strength, there will be more supply, and as there's only so much demand in North America it will have to go elsewhere.

**Mr. Brad Trost:** To change gears here a little, hydro.... I think it was the other night in the House we voted on a motion about hydro, involving Labrador and a few things like that. Where are the areas in the country—and again this is all provincial domain—where we still have potential for hydro development, and what tend to be the issues holding back hydro development? You can say political issues plus. I'm looking at more than the non-political issues. But excluding political issues, what tends to be holding back the maximizing of our hydro development in this country?

**Mr. Jonathan Will:** One of the most significant things holding back development of electricity is the long lead time for project approval. A hydro plant, if you talk to industry—the Canadian Hydropower Association, for example—takes significantly longer than putting in a gas plant. It could take up to 10 years to get through the environmental assessment process from start to finish for a hydro dam, while in the past it was gas, although with the new timelines for environmental assessments, that will accelerate.

**Mr. Brad Trost:** With some of the changes that have been made in the last few years, is there the potential that we could actually lower that timeline from 10 years? I realize that you have a lot of studies to do when you're dealing in a remote area with a large geography. Is there a realistic prospect that we can lower that timeline from 10 years to something...? What are we looking at?

**Mr. Jonathan Will:** I'm sorry. That 10 years, I should clarify, includes construction. It does make developing hydro a long-term decision, though, when if you wanted to put electricity on the grid right away you could do it very quickly with gas. In terms of areas of the country, there are new projects in B.C., Manitoba, Quebec, and Newfoundland and Labrador.

**Mr. Brad Trost:** So there are still waterways for our use?

**Mr. Jonathan Will:** There are still waterways. Generally, the most economical resources were used first, but that being said, there are still economical resources to be developed in Canada.

**The Chair:** Thank you, Mr. Trost.

Mr. Nicholls, you have a couple of minutes.

**Mr. Jamie Nicholls:** Thank you, Mr. Chair.

A few of our witnesses from our previous study mentioned the smart grid and really looking forward, and governments always have to predict what the next infrastructure will be. If we're going to be integrating different kinds of renewables, many of the witnesses said that we would require a smart grid.

Mr. Anderson mentioned the history and the history of governments in his province. When I think about the history and I look back 50 or 60 years, we don't seem to have advanced very far. We have a big problem that shouldn't be a problem: the overproduction of oil right now. We don't have any way to move that product, yet we import 50% of our oil into this country. It doesn't really seem to make sense.

Back in 1956 and 1957, Ernest Manning had a plan to detonate a nuclear device in the Athabasca oil sands. He talked about that with Mr. Diefenbaker. He said that they were marketing less than 50% of the oil that they were able to produce, so they contemplated actually detonating a nuclear device in the Athabasca oil sands. That was the level of innovation at that time.

Going forward and thinking about market diversification, I would hope that we're going to be more creative than they were back then in the 1950s, and that we're going to look toward what Canada's energy security needs are. We're going to ask the question: why haven't we prepared up to this point? Our infrastructure is aging and our pipeline infrastructure is aging, and that's part of the difficulty of gaining the social license.

The TransCanada pipeline, which today they're talking about converting over to oil, is the same pipeline that caused such an uproar in 1956 when the Speaker of the House—and coincidentally, the member for Vaudreuil—invoked closure on the debate surrounding the construction of the TransCanada pipeline.

I would hope, going forward, that in terms of market diversification we're going to look not to the past, but to the future, and that we're going to think about things like the smart grid. I wonder where we are on the idea of developing a smart grid, because I know that it will take about 20 years to do so.

• (1730)

**The Chair:** Maybe we could have a 30-second answer before we close off the meeting.

**Mr. Jonathan Will:** Yes. I can give you a very quick answer.

There is significant work being done to develop smarter ways of integrating electricity sources. One of the issues is that the smart grid means different things to different people. To some people, it's software to better manage it, and it's technological. Our department

has invested in demonstration projects focusing on better integrating renewables, especially intermittent renewables such as wind and solar power, into the grid.

**The Chair:** Thank you very much.

Thank you, Mr. Nicholls.

Thank you to the officials for being here today: Ms. Knobel, from Foreign Affairs, and Mr. Foran, Mr. Labonté, Mr. Will, and Mr. McCauley. I think this is a great base on which to start our study, and I do appreciate it very much.

Members of the committee, a copy of a budget is before you—mainly witness expenses—and if you could have a look at it, we'll pass it, if that's your will, at the start of the next meeting.

Thanks very much to all of you. Have a good weekend in your constituencies.

The meeting is adjourned.

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